U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

UNITS OF WEIGHT AND MEASURE

(UNITED STATES CUSTOMARY AND METRIC)

DEFINITIONS AND TABLES OF EQUIVALENTS

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MISCELLANEOUS PUBLICATION M121
(Superseding Circular C47)

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U.S. GOVERNMENT
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U. S. DEPARTMENT OF COMMERCE
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Issued January 1936
[Superseding Bureau of Standards Circular C47]

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1936

For sale by the Superintendent of Documents, Washington, D. C. - - - - Price 15 cents

CONTENTS

	Page
I. Introduction	1
II. Fundamental equivalents	2
III. Definitions of units	3
1. Length	3
2. Area	3
3. Volume	4
4. Capacity	4
5. Mass	5
IV. Standards of measurement	5
V. Spelling and abbreviation of units	6
1. List of the most common units of weight and measure and their abbreviations	7
VI. Tables of interrelation of units of measurement	8
1. Length	8
2. Area	8
3. Volume	8
4. Capacity—Liquid measure	8
5. Capacity—Dry measure	10
6. Mass—Less than pounds and kilograms	10
7. Mass—Greater than avoirdupois ounces	10
VII. Comparison of metric and customary units from 1 to 9	12
1. Length	12
2. Area	12
3. Volume	12
4. Capacity—Liquid measure	13
5. Capacity—Dry measure	13
6. Mass	13
7. Comparison of the various tons and pounds in use in the United States (from 1 to 9 units)	14
VIII. Special tables	15
Length:	
Inches and millimeters—equivalents of decimal and binary fractions of an inch, in millimeters, from 1/64 to 1 inch	15
Hundredths of an inch to millimeters, from 1 to 99 hundredths	15
Millimeters to hundredths of an inch, from 1 to 99 units	15
United States nautical miles, international nautical miles, and kilometers	16
Millimeters to inches	18
IX. Tables of equivalents from 1 to 999 units	27
Length:	
Feet to meters	28
Meters to feet	30
Miles to kilometers	32
Kilometers to miles	34
Area:	
Acres to hectares	36
Hectares to acres	38
Volume:	
Cubic yards to cubic meters	40
Cubic meters to cubic yards	42
Capacity:	
Liquid quarts to liters	44
Liters to liquid quarts	46
Gallons to liters	48
Liters to gallons	50
Bushels to hectoliters	52
Hectoliters to bushels	54
Mass:	
Avoirdupois pounds to kilograms	56
Kilograms to avoirdupois pounds	58
X. Metric and English distance equivalents for athletic events (track and field)	60
1. Metric units in athletics	60
2. Distance equivalents	61
XI. Graphic comparison chart of screw thread pitches Facing	62

Page

XII. Status of international metric system in the United States 63
1. Constitutional authority to fix standards 63
2. Metric system legalized 63
3. Metric standards adopted as fundamental 63
4. Metric balances furnished certain post offices 63
5. Metric weights used for certain coins 63
6. Congress provides metric standards for the States of the Union, land-grant agricultural colleges, and the Smithsonian Institution 63
7. United States joins in establishing International Bureau of Weights and Measures 63
8. Congress adopts the metric units for electrical measures 64
9. Metric system required in the medical work of the War and Navy Departments and U. S. Public Health Service of the Treasury Department 64
10. Metric carat adopted as unit of weight for diamonds and other precious stones 64
11. Metric system optional in Puerto Rico 64
12. Metric system made the legal system in the Philippine Islands 64
13. Relation between inches and millimeters adopted by American Standards Association 65
14. Distances in multiples of metric units adopted for Amateur Athletic Union track events 65

XIII. Index 66

I. INTRODUCTION

This publication supersedes Bureau Circular C47, issued July 1, 1914. Necessary corrections have been made and the text has been revised and rearranged. The supplement to Circular C47 (Table of Equivalents—Millimeters to Inches), issued October 27, 1917; Miscellaneous Publication M49 (Graphic Comparison of Screw Thread Pitches); and Letter Circular LC376 (Metric and English Distance Equivalents for Athletic Events) are included in the body of the publication.[1]

In the construction of the tables in this publication, when the fundamental relation of the units furnished directly a reduction factor for use in determining the multiples of the units, this factor was used in its fundamental form, as, for example, that 1 meter=39.37 inches. Reduction factors which it was necessary to obtain, however, by multiplication, division, powers, or roots, etc., of the fundamental relations were usually carried out to a greater degree of accuracy than that to which it is usually possible to make measurements, for convenience in computing the multiples to the accuracy desired.

When the tables do not give the equivalent of any desired quantity directly and completely, the equivalent can usually be obtained, without the necessity of making a multiplication of these reduction factors, by using quantities from several tables, making a shift of decimal points, if necessary, and merely adding the results.

The supplementary metric units are formed by combining the words "meter", "gram", and "liter" with the six numerical prefixes, as in the following table:

Prefixes		Meaning			Units
milli-	=	*one-thousandth*	$\frac{1}{1000}$	.001	"meter" *for length.*
centi-	=	*one-hundredth*	$\frac{1}{100}$	.01	
deci-	=	*one-tenth*	$\frac{1}{10}$	.1	"gram" *for weight or mass.*
Unit	=	*one*		1	
deka-	=	*ten*	$\frac{10}{1}$	10	"liter" *for capacity.*
hecto-	=	*one hundred*	$\frac{100}{1}$	100	
kilo-	=	*one thousand*	$\frac{1000}{1}$	1000	

All lengths, areas, and cubic measures in the following tables are derived from the international meter, the basic relation between units of the customary and the metric systems being:

$$1 \text{ meter} = 39.37 \text{ inches},$$

contained in the law of July 28, 1866,[2] and set forth in the Mendenhall Order[3] of April 5, 1893, namely:

$$\frac{1 \text{ yard}}{1 \text{ meter}} = \frac{3600}{3937}.$$

[1] Weights and measures publications of the National Bureau of Standards are listed in Miscellaneous Publication M103, Weights and Measures References, which may be obtained by purchase (price 10 cents) from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

[2] United States Code, title 15, ch. 6, sec. 205 (Revised Statutes, sec. 3570).

[3] U. S. Coast and Geodetic Survey Bulletin 26, Apr. 5, 1893.

All capacities are based on the equivalent 1 liter equals 1.000 027 cubic decimeters. The decimeter is equal to 3.937 inches in accordance with the legal equivalent of the meter given above. The gallon referred to in the tables is the United States gallon of 231 cubic inches. The bushel is the United States bushel of 2 150.42 cubic inches. These units must not be confused with the British units of the same name which differ from those used in the United States. The British gallon (277.420 cubic inches) is approximately 20 percent larger, and the British bushel (2 219.36 cubic inches) is 3 percent larger than the corresponding units used in this country.

All weights are derived from the International Kilogram, as authorized in the Mendenhall Order of April 5, 1893. The relation used is 1 avoirdupois pound= 453.592 427 7 grams.

II. FUNDAMENTAL EQUIVALENTS

In its original conception the meter was the fundamental unit of the metric system, and all units of length and capacity were to be derived directly from the meter which was intended to be equal to one ten-millionth of the earth's quadrant. Furthermore, it was originally planned that the unit of mass, the kilogram, should be identical with the mass of a cubic decimeter of water at its maximum density. At present, however, the units of length and mass are defined independently of these conceptions.

The International Prototype Meter is kept at the International Bureau of Weights and Measures. By definition the meter now bears no definite relation to the earth's quadrant, but is the length of a certain platinum-iridium bar when supported in a definitely specified manner, at the temperature of melting ice, and at standard atmospheric pressure (760 millimeters of mercury). The kilogram is independently defined as the mass of a definite platinum-iridium standard, the International Prototype Kilogram, which is also kept at the International Bureau of Weights and Measures. The liter is defined as the volume of a kilogram of water, at standard atmospheric pressure, and at the temperature of its maximum density, approximately 4° C. The meter is thus the fundamental unit on which are based all metric standards and measurements of length and area, and of volumes derived from linear measurements.

A supplementary definition of the meter in terms of the wave length of light was adopted provisionally by the Seventh General (International) Conference on Weights and Measures, in 1927. According to this definition, the relation[4] for red cadmium light waves under specified conditions of temperature, pressure, and humidity is

$$1 \text{ meter} = 1\,553\,164.13 \text{ wave lengths.}$$

This corresponds to a wave length (cadmium red) of

$$6\,438.469\,6 \times 10^{-7} \text{ millimeters.}$$

The kilogram is the fundamental unit on which are based all metric standards of mass. The liter is a secondary or derived unit of capacity or volume. The liter is larger by about 27 parts per million than the cube of the tenth of the meter, i. e., the cubic decimeter—that is, 1 liter=1.000 027 cubic decimeters.

The conversion tables in this publication which involve the relative length of the yard and meter are based upon the relation:

$$1 \text{ meter} = 39.37 \text{ inches,}$$

contained in the act of Congress of 1866.[5] From this relation it follows that 1 inch= 25.400 05 millimeters (nearly).

[4] J. R. Benoit, C. Fabry, and A. Perot, Nouvelle détermination du rapport des longueurs d'onde fondamentales avec l'unité métrique. Trav. et Mém. Bur. Int. Poids et Mesures **15**, 131 (1913).

[5] United States Code, title 15, sec. 205.

In recent years engineering and industrial interests the world over have urged the adoption of the simpler relation, 1 inch=25.4 millimeters exactly, which differs from the preceding value by only 2 parts in a million. This simpler relation has not as yet been officially adopted by either Great Britain or the United States, but is in wide industrial use.[6]

III. DEFINITIONS OF UNITS

1. LENGTH

Fundamental Units

A meter (m) is a unit of length equal to the distance between the defining lines on the International Prototype Meter when this standard is at the temperature of melting ice (0° C).

A yard (yd) is a unit of length equal to $\frac{3600}{3937}$ of a meter.

Multiples and Submultiples

1 kilometer (km)=1 000 meters.
1 hectometer (hm)=100 meters.
1 dekameter (dkm)=10 meters.
1 decimeter (dm)=0.1 meter.
1 centimeter (cm)=0.01 meter.
1 millimeter (mm)=0.001 meter.
1 micron (μ)=0.000 001 meter=0.001 millimeter.
1 millimicron (mμ)=0.000 000 001 meter=0.001 micron.
1 angstrom (A) {=0.000 000 1 millimeter. =.000 1 micron. =.1 millimicron.
1 statute mile {=8 furlongs=320 rods. =1 760 yards=5 280 feet.
1 furlong=⅛ mile=40 rods=220 yards=660 feet.
1 rod=5½ yards=16½ feet=25 links.
1 foot=⅓ yard=12 inches.
1 hand=4 inches.
1 inch=$\frac{1}{36}$ yard=$\frac{1}{12}$ foot.
1 line (button)=$\frac{1}{40}$ inch.
1 point (printers)=$\frac{1}{72}$ inch.
1 mil=$\frac{1}{1000}$ inch.
1 chain (Gunter's)=4 rods=22 yards=66 feet=100 links.
1 link (Gunter's)=$\frac{1}{100}$ chain=7.92 inches.
1 U. S. nautical mile, 1 sea mile, 1 geographical mile =1 853.248 meters=6 080.20 feet.
1 international nautical mile=1 852 meters=6 076.10 feet.
1 fathom=6 feet=8 spans.
1 span=⅛ fathom=9 inches.

2. AREA

Fundamental Units

A square meter (m^2) is a unit of area equal to the area of a square the sides of which are 1 meter.

A square yard (sq yd) is a unit of area equal to the area of a square the sides of which are 1 yard.

Multiples and Submultiples

1 square kilometer (km^2)=1 000 000 square meters.
1 hectare (ha), or square hectometer (hm^2)=10 000 square meters.

[6] Conversion tables (ASA B48.1–1933), computed on the basis of 1 inch=25.4 mm exactly, may be obtained from the American Standards Association, New York, N. Y.

1 are (a), or square dekameter (dkm^2)=100 square meters.
1 centare (ca)=1 square meter.
1 square decimeter (dm^2)=0.01 square meter.
1 square centimeter (cm^2)=0.000 1 square meter.
1 square millimeter (mm^2)=0.000 001 square meter.
1 square mile (sq mi) {=640 acres=102 400 square rods. =3 097 600 square yards=27 878 400 square feet.
1 acre (acre)=10 square chains {=160 square rods=4 840 square yards. =43 560 square feet.
1 square chain (sq ch) {=16 square rods=484 square yards=4 356 square feet. =10 000 square links.
1 square link (sq li) {=0.000 1 square chain=0.048 4 square yard. =0.435 6 square foot=62.726 4 square inches.
1 square rod (sq rd)=30.25 square yards=272.25 square feet=625 square links.
1 square foot (sq ft)=1/9 square yard=144 square inches.
1 square inch (sq in.)=1/1296 square yard=1/144 square foot.

3. VOLUME

Fundamental Units

A **cubic meter** (m^3) is a unit of volume equal to a cube the edges of which are 1 meter.

A **cubic yard** (cu yd) is a unit of volume equal to a cube the edges of which are 1 yard.

Multiples and Submultiples

1 cubic kilometer (km^3)=1 000 000 000 cubic meters.
1 cubic hectometer (hm^3)=1 000 000 cubic meters.
1 cubic dekameter (dkm^3)=1 000 cubic meters.
1 stere (s)=1 cubic meter.
1 cubic decimeter (dm^3)=0.001 cubic meter.
1 cubic centimeter (cm^3)=0.000 001 cubic meter=0.001 cubic decimeter.
1 cubic millimeter (mm^3)=0.000 000 001 cubic meter=0.001 cubic centimeter.
1 cubic foot (cu ft)=1/27 cubic yard.
1 cubic inch (cu in.)=1/46656 cubic yard=1/1728 cubic foot.
1 board foot (fbm)=144 cubic inches=1/12 cubic foot.
1 cord (cd)=128 cubic feet.

4. CAPACITY

Fundamental Units

A **liter** (liter) is a unit of capacity equal to the volume occuped by the mass of 1 kilogram of pure water at its maximum density (at a temperature of 4° C, practically) and under the standard atmospheric pressure (of 760 mm). It is equivalent in volume to 1.000 027 cubic decimeters.

A **gallon** (gal) is a unit of capacity equal to the volume of 231 cubic inches. It is used for the measurement of liquid commodities only.

A **bushel** (bu) is a unit of capacity equal to the volume of 2 150.42 cubic inches. It is used in the measurement of dry commodities only.[7]

Multiples and Submultiples

1 hectoliter (hl)=100 liters.
1 dekaliter (dkl)=10 liters.
1 deciliter (dl)=0.1 liter.
1 centiliter (cl)=0.01 liter.

[7] This is the so-called stricken or struck bushel. A heaped bushel for apples of 2 747.715 cubic inches was established by the U. S. Court of Customs Appeals on Feb. 15, 1912, in United States *v.* Weber (no. 757). A heaped bushel, equivalent to 1¼ stricken bushels, is also recognized.

1 milliliter (ml)=0.001 liter=1.000 027 cubic centimeters.
1 liquid quart (liq qt)=$\frac{1}{4}$ gallon=57.75 cubic inches.
1 liquid pint (liq pt)=$\frac{1}{8}$ gallon=$\frac{1}{2}$ liquid quart=28.875 cubic inches.
1 gill (gi)=$\frac{1}{32}$ gallon=$\frac{1}{4}$ liquid pint=7.218 75 cubic inches.
1 fluid ounce (fl oz)=$\frac{1}{128}$ gallon=$\frac{1}{16}$ liquid pint.
1 fluid dram (fl dr)=$\frac{1}{8}$ fluid ounce=$\frac{1}{128}$ liquid pint.
1 minim (min *or* ♏)=$\frac{1}{60}$ fluid dram=$\frac{1}{480}$ fluid ounce.
1 peck (pk)=$\frac{1}{4}$ bushel=537.605 cubic inches.
1 dry quart (dry qt)=$\frac{1}{32}$ bushel=$\frac{1}{8}$ peck=67.200 625 cubic inches.
1 dry pint (dry pt)=$\frac{1}{64}$ bushel=$\frac{1}{2}$ dry quart=33.600 312 5 cubic inches.
1 barrel, for fruits, vegetables, and other dry commodities, other than cranberries,[8]=7 056 cubic inches=105 dry quarts.
1 barrel for cranberries=5 826 cubic inches.[9]

5. MASS

Fundamental Units

A **kilogram** (kg) is a unit of mass equal to the mass of the International Prototype Kilogram.

A **gram** (g) is a unit of mass equal to one-thousandth of the mass of the International Prototype Kilogram.

An **avoirdupois pound** (lb avdp) is a unit of mass equal to 0.453 592 427 7 kilogram.

A **troy pound** (lb t) is a unit of mass equal to $\frac{5760}{7000}$ of that of the avoirdupois pound.

Multiples and Submultiples

1 metric ton (t)=1 000 kilograms.
1 hectogram (hg)=100 grams.
1 dekagram (dkg)=10 grams.
1 decigram (dg)=0.1 gram.
1 centigram (cg)=0.01 gram.
1 milligram (mg)=0.001 gram.
1 metric carat [10] (c)=200 milligrams=0.2 gram.
1 avoirdupois ounce (oz avdp)=$\frac{1}{16}$ avoirdupois pound=437.5 grains.
1 avoirdupois dram (dr avdp)=$\frac{1}{256}$ avoirdupois pound=$\frac{1}{16}$ avoirdupois ounce.
1 grain (grain)=$\frac{1}{7000}$ avoirdupois pound=$\frac{1}{5760}$ troy pound.
1 apothecaries' pound (lb ap)=1 troy pound=$\frac{5760}{7000}$ avoirdupois pound.
1 apothecaries' or troy ounce (oz ap *or* ℥, oz t)=$\frac{1}{12}$ troy pound=$\frac{480}{7000}$ avoirdupois pound=480 grains.
1 apothecaries' dram (dr ap *or* ʒ)=$\frac{1}{96}$ apothecaries' pound=$\frac{1}{8}$ apothecaries' ounce=60 grains.
1 pennyweight (dwt)=$\frac{1}{20}$ troy ounce=24 grains.
1 apothecaries' scruple (s ap *or* ℈)=$\frac{1}{3}$ apothecaries' dram=20 grains.
1 short hundredweight (sh cwt)=100 avoirdupois pounds.
1 long hundredweight (l cwt)=112 avoirdupois pounds.
1 short ton (sh tn)=2 000 avoirdupois pounds.
1 long ton (l tn)=2 240 avoirdupois pounds.

IV. STANDARDS OF MEASUREMENT

Units of measurement should be distinguished from standards of measurement. Units of length are fixed distances, independent of any other consideration, while length standards are affected by the expansion and contraction resulting from changes of temperature of the material of which the standard is composed. It is therefore

[8] As fixed by United States standard barrel act (United States Code, title 15, ch. 6, sec. 234).
[9] As computed from dimensions fixed by United States standard barrel act, see above.
[10] See Bureau of Standards Circular C43, The Metric Carat, for a discussion of the metric carat and tables of the relations of the metric carat to the old carat of 205.3 milligrams in use in this country previous to July 1, 1913.

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necessary to fix upon some temperature at which the distance between the defining lines or end surfaces of the standards shall be equal to the unit. The same is true of standards of capacity, which at some definite temperature contain a given number of units of volume.

The recommended standard temperature for commercial and industrial length standards is 20° C (68° F). Some metric standards, especially those made in Europe until recently, are intended to be correct at 0° C. In the past some length standards graduated in the customary units have been made to be correct at 62° F (16.67° C).

For measurements of high precision it is also necessry to specify the manner of support of the standards, whether at certain points only or throughout their entire length, and in the case of tapes it is also necessary to give the tension applied to the tape when in use.

In the United States the capacity standards, both metric and customary, are made to hold the specified volumes at 4° C. Standards of capacity are usually made of brass and the capacity at any other temperature may be computed by the use of the coefficient of cubical expansion of that material usually assumed to be 0.000 054 per degree centigrade. In the purchase and sale of liquids a more important consideration than the temperature of the measures is the temperature of the liquid when measured, for the reason that the large coefficient of expansion of many liquids makes the actual mass of a given volume delivered vary considerably with temperature.

While the temperature of a weight does not affect its mass, it is nevertheless important that when two weights are compared in air they both be at the same temperature as the air. If there is a difference between the temperature of the air and the weights, convection currents will be set up and the readings of the balance will be thereby affected. Also, since weights are buoyed up by the surrounding air by amounts dependent upon their volumes, it is desirable that the weights of any set be of the same material. If two weights of the same density balance in air of a certain density they will balance in vacuo or in air of a different density.

Brass is the material most widely used for standard weights, although platinum and aluminum are quite commonly used for weights of 1 gram or less. In the absence of any knowledge as to the actual density of weights, those made of brass are assumed to have a density of 8.4 grams per cm^3 at 0° C, while those of platinum and of aluminum are assumed to have densities of 21.5 and 2.7 grams per cm^3, respectively.

V. SPELLING AND ABBREVIATION OF UNITS

The spelling of the names of units as adopted by the National Bureau of Standards is that given in the list below. The spelling of the metric units is in accordance with that given in the law of July 28, 1866, legalizing the metric system in the United States.

Following the name of each unit in the list below is given the abbreviation which the Bureau has adopted. Attention is particularly called to the following principles:

1. The period is omitted after all abbreviations of units, except where the abbreviation forms an English word.

2. The exponents "^{2}" and "^{3}" are used to signify "square" and "cubic", respectively, in the case of the metric units, instead of the abbreviations "sq" or "cu". In conformity with this principle the abbreviation for cubic centimeter is "cm^3" (instead of "cc" or "c cm"). The term "cubic centimeter", as used in chemical work, is, in fact, a misnomer, since the unit actually used is the "milliliter", of which the correct abbreviation is "ml". (See p. 4).

3. The use of the same abbreviation for both singular and plural is recommended. This practice is already established in expressing metric units and is in accordance with the spirit and chief purpose of abbreviations.

4. It is also suggested that, unless all the text is printed in capital letters, only small letters be used for abbreviations, except in such case as A for angstrom, etc., where the use of capital letters is general.

1. LIST OF THE MOST COMMON UNITS OF WEIGHT AND MEASURE AND THEIR ABBREVIATIONS

Unit	Abbreviation	Unit	Abbreviation	Unit	Abbreviation
acre	acre	dram, apothacaries'	dr ap *or* ʒ	ounce, avoirdupois	oz avdp
angstrom	A	dram, avoirdupois	dr avdp	ounce, fluid	fl oz
are	a	dram, fluid	fl dr	ounce, troy	oz t
avoirdupois	avdp	fathom	fath	peck	pk
barrel	bbl	foot	ft	pennyweight	dwt
board foot	fbm	furlong	fur.	pint	pt
bushel	bu	gallon	gal	pound	lb
carat	c	grain	grain	pound, apothecaries'	lb ap
centare	ca	gram	g	pound, avoirdupois	lb avdp
centigram	cg	hectare	ha	pound, troy	lb t
centiliter	cl	hectogram	hg	quart	qt
centimeter	cm	hectoliter	hl	rod	rd
chain	ch	hectometer	hm	scruple, apothecaries	s ap *or* ℈
cubic centimeter	cm^3	hogshead	hhd	square centimeter	cm^2
cubic decimeter	dm^3	hundredweight	cwt	square chain	sq ch
cubic dekameter	dkm^3	inch	in.	square decimeter	dm^2
cubic foot	cu ft	kilogram	kg	square dekameter	dkm^2
cubic hectometer	hm^3	kiloliter	kl	square foot	sq ft
cubic inch	cu in.	kilometer	km	square hectometer	hm^2
cubic kilometer	km^3	link	li	square inch	sq in.
cubic meter	m^3	liquid	liq	square kilometer	km^2
cubic mile	cu mi	liter	liter	square link	sq li
cubic millimeter	mm^3	meter	m	square meter	m^2
cubic yard	cu yd	metric ton	t	square mile	sq mi
decigram	dg	micron	μ	square millimeter	mm^2
deciliter	dl	mile	mi	square rod	sq rd
decimeter	dm	milligram	mg	square yard	sq yd
decistere	ds	milliliter	ml	stere	s
dekagram	dkg	millimeter	mm	ton	tn
dekaliter	dkl	millimicron	mμ	ton, metric	t
dekameter	dkm	minim	min *or* ♏	troy	t
dekastere	dks	ounce	oz	yard	yd
dram	dr	ounce, apothecaries'	oz ap *or* ℥		

VI. TABLES OF INTERRELATION

1. UNITS OF

Units	Inches	Links	Feet	Yards	Rods
1 inch =	1	0.126 263	0.083 333 3	0.027 777 8	0.005 050 51
1 link =	7.92	1	0.66	0.22	0.04
1 foot =	12	1.515 152	1	0.333 333	0.060 606 1
1 yard =	36	4.545 45	3	1	0.181 818
1 rod =	198	25	16.5	5.5	1
1 chain =	792	100	66	22	4
1 mile =	63 360	8000	5280	1760	320
1 centimeter =	0.3937	0.049 709 60	0.032 808 33	0.010 936 111	0.001 988 384
1 meter =	39.37	4.970 960	3.280 833	1.093 611 1	0.198 838 4

2. UNITS OF

Units	Square inches	Square links	Square feet	Square yards	Square rods	Square chains
1 square inch =	1	0.015 942 3	0.006 944 44	0.000 771 605	0.000 025 507 6	0.000 001 594 23
1 square link =	62.7264	1	0.4356	0.0484	0.0016	0.0001
1 square foot =	144	2.295 684	1	0.111 111 1	0.003 673 09	0.000 229 568
1 square yard =	1296	20.6612	9	1	0.033 057 85	0.002 066 12
1 square rod =	39 204	625	272.25	30.25	1	0.0625
1 square chain =	627 264	10 000	4356	484	16	1
1 acre =	6 272 640	100 000	43 560	4840	160	10
1 square mile =	4 014 489 600	64 000 000	27 878 400	3 097 600	102 400	6400
1 square centimeter =	0.154 999 7	0.002 471 04	0.001 076 387	0.000 119 598 5	0.000 003 953 67	0.000 000 247 104
1 square meter =	1549.9969	24.7104	10.763 87	1.195 985	0.039 536 7	0.002 471 04
1 hectare =	15 499 969	247 104	107 638.7	11 959.85	395.367	24.7104

3. UNITS OF

Units	Cubic inches	Cubic feet	Cubic yards
1 cubic inch =	1	0.000 578 704	0.000 021 433 47
1 cubic foot =	1728	1	0.037 037 0
1 cubic yard =	46 656	27	1
1 cubic centimeter =	0.061 023 38	0.000 035 314 45	0.000 001 307 94
1 cubic decimeter =	61.023 38	0.035 314 45	0.001 307 943
1 cubic meter =	61 023.38	35.314 45	1.307 942 8

4. UNITS OF CAPACITY

Units	Minims	Fluid drams	Fluid ounces	Gills	Liquid pints
1 minim =	1	0.016 666 7	0.002 083 33	0.000 520 833	0.000 130 208
1 fluid dram =	60	1	0.125	0.031 25	0.007 812 5
1 fluid ounce =	480	8	1	0.25	0.0625
1 gill =	1920	32	4	1	0.25
1 liquid pint =	7680	128	16	4	1
1 liquid quart =	15 360	256	32	8	2
1 gallon =	61 440	1024	128	32	8
1 milliliter =	16.2311	0.270 518	0.033 814 7	0.008 453 68	0.002 113 42
1 liter =	16 231.1	270.518	33.8147	8.453 68	2.113 42
1 cubic inch =	265.974	4.432 90	0.554 113	0.138 528	0.034 632 0

OF UNITS OF MEASUREMENT

LENGTH

Chains	Miles	Centimeters	Meters	Units
0.001 262 63	0.000 015 782 8	2.540 005	0.025 400 05	=1 inch
0.01	0.000 125	20.116 84	0.201 168 4	=1 link
0.015 151 5	0.000 189 393 9	30.480 06	0.304 800 6	=1 foot
0.045 454 5	0.000 568 182	91.440 18	0.914 401 8	=1 yard
0.25	0.003 125	502.9210	5.029 210	=1 rod
1	0.0125	2011.684	20.116 84	=1 chain
80	1	160 934.72	1609.3472	=1 mile
0.000 497 096 0	0.000 006 213 699	1	0.01	=1 centimeter
0.049 709 60	0.000 621 369 9	100	1	=1 meter

AREA

Acres	Square miles	Square centimeters	Square meters	Hectares	Units
0.000 000 159 423	0.000 000 000 249 1	6.451 626	0.000 645 162 6	0.000 000 064 516	=1 square inch
0.000 01	0.000 000 015 625	404.6873	0.040 468 73	0.000 004 046 87	=1 square link
0.000 022 956 8	0.000 000 035 870 1	929.0341	0.092 903 41	0.000 009 290 34	=1 square foot
0.000 206 612	0.000 000 322 831	8361.307	0.836 130 7	0.000 083 613 1	=1 square yard
0.006 25	0.000 009 765 625	252 929.5	25.292 95	0.002 529 295	=1 square rod
0.1	0.000 156 25	4 046 873	404.6873	0.040 468 7	=1 square chain
1	0.001 562 5	40 468 726	4046.873	0.404 687	=1 acre
640	1	25 899 984 703	2 589 998	258.9998	=1 square mile
0.000 000 024 710 4	0.000 000 000 038 610 06	1	0.0001	0.000 000 01	=1 square centimeter
0.000 247 104	0.000 000 386 100 6	10 000	1	0.0001	=1 square meter
2.471 04	0.003 861 006	100 000 000	10 000	1	=1 hectare

VOLUME

Cubic centimeters	Cubic decimeters	Cubic meters	Units
16.387 162	0.016 387 16	0.000 016 387 16	=1 cubic inch
28 317.016	28.317 016	0.028 317 016	=1 cubic foot
764 559.4	764.5594	0.764 559 4	=1 cubic yard
1	0.001	0.000 001	=1 cubic centimeter
1 000	1	0.001	=1 cubic decimeter
1 000 000	1000	1	=1 cubic meter

LIQUID MEASURE

Liquid quarts	Gallons	Milliliters	Liters	Cubic inches	Units
0.000 065 104	0.000 016 276	0.061 610 2	0.000 061 610 2	0.003 759 77	=1 minim
0.003 906 25	0.000 976 562	3.696 61	0.003 696 61	0.225 586	=1 fluid dram
0.031 25	0.007 812 5	29.5729	0.029 572 9	1.804 69	=1 fluid ounce
0.125	0.031 25	118.292	0.118 292	7.218 75	=1 gill
0.5	0.125	473.167	0.473 167	28.875	=1 liquid pint
1	0.25	946.333	0.946 333	57.75	=1 liquid quart
4	1	3785.332	3.785 332	231	=1 gallon
0.001 056 71	0.000 264 178	1	0.001	0.061 025 0	=1 milliliter
1.056 71	0.264 178	1000	1	61.0250	=1 liter
0.017 316 0	0.004 329 00	16.3867	0.016 386 7	1	=1 cubic inch

5. UNITS OF CAPACITY

Units	Dry pints	Dry quarts	Pecks	Bushels
1 dry pint =	1	0.5	0.0625	0.015 625
1 dry quart =	2	1	0.125	0.031 25
1 peck =	16	8	1	0.25
1 bushel =	64	32	4	1
1 liter =	1.816 20	0.908 102	0.113 513	0.028 378
1 dekaliter =	18.1620	9.081 02	1.135 13	0.283 78
1 cubic inch =	0.029 761 6	0.014 880 8	0.001 860 10	0.000 465 025

6. UNITS OF MASS LESS

Units *	Grains	Apothecaries' scruples	Pennyweights	Avoirdupois drams	Apothecaries' drams	Avoirdupois ounces
1 grain =	1	0.05	0.041 666 67	0.036 571 43	0.016 666 7	0.002 285 71
1 apoth. scruple =	20	1	0.833 333 3	0.731 428 6	0.333 333	0.045 714 3
1 pennyweight =	24	1.2	1	0.877 714 3	0.4	0.054 857 1
1 avoir. dram =	27.343 75	1.367 187 5	1.139 323	1	0.455 729 2	0.0625
1 apoth. dram =	60	3	2.5	2.194 286	1	0.137 142 9
1 avoir. ounce =	437.5	21.875	18.229 17	16	7.291 66	1
1 apoth. or troy ounce =	480	24	20	17.554 28	8	1.097 142 9
1 apoth. or troy pound =	5760	288	240	210.6514	96	13.165 714
1 avoir. pound =	7000	350	291.6667	256	116.6667	16
1 milligram =	0.015 432 356	0.000 771 618	0.000 643 014 8	0.000 564 383 3	0.000 257 205 9	0.000 035 273 96
1 gram =	15.432 356	0.771 618	0.643 014 85	0.564 383 3	0.257 205 9	0.035 273 96
1 kilogram =	15 432.356	771.6178	643.014 85	564.383 32	257.205 94	35.273 96

7. UNITS OF MASS

Units	Avoirdupois ounces	Avoirdupois pounds	Short hundred-weights	Short tons
1 avoirdupois ounce =	1	0.0625	0.000 625	0.000 031 25
1 avoirdupois pound =	16	1	0.01	0.0005
1 short hundredweight =	1600	100	1	0.05
1 short ton =	32 000	2000	20	1
1 long ton =	35 840	2240	22.4	1.12
1 kilogram =	35.273 957	2.204 622 34	0.022 046 223	0.001 102 311 2
1 metric ton =	35 273.957	2204.622 34	22.046 223	1.102 311 2

* "Avoir," is now abbreviated "avdp".

DRY MEASURE

Liters	Dekaliters	Cubic inches	Units
0.550 599	0.055 060	33.600 312 5	=1 dry pint
1.101 198	0.110 120	67.200 625	=1 dry quart
8.809 58	0.880 958	537.605	=1 peck
35.2383	3.523 83	2150.42	=1 bushel
1	0.1	61.0250	=1 liter
10	1	610.250	=1 dekaliter
0.016 386 7	0.001 638 67	1	=1 cubic inch

THAN POUNDS AND KILOGRAMS

Apothecaries' or troy ounces	Apothecaries' or troy pounds	Avoirdupois pounds	Milligrams	Grams	Kilograms	Units
0.002 083 33	0.000 173 611 1	0.000 142 857 1	64.798 918	0.064 798 918	0.000 064 798 9	=1 grain
0.041 666 7	0.003 472 222	0.002 857 143	1295.9784	1.295 978 4	0.001 295 978	=1 apoth. scruple
0.05	0.004 166 667	0.003 428 571	1555.1740	1.555 174 0	0.001 555 174	=1 pennyweight
0.056 966 146	0.004 747 178 8	0.003 906 25	1771.8454	1.771 845 4	0.001 771 845	=1 avoir. dram
0.125	0.010 416 667	0.008 571 429	3887.9351	3.887 935 1	0.003 887 935	=1 apoth. dram
0.911 458 3	0.075 954 861	0.0625	28 349.527	28.349 527	0.028 349 53	=1 avoir. ounce
1	0.083 333 33	0.068 571 43	31 103.481	31.103 481	0.031 103 48	=1 apoth. or troy ounce
12	1	0.822 857 1	373 241.77	373.241 77	0.373 241 77	=1 apoth. or troy pound
14.583 333	1.215 277 8	1	453 592.4277	453.592 4277	0.453 592 427 7	=1 avoir. pound
0.000 032 150 74	0.000 002 679 23	0.000 002 204 62	1	0.001	0.000 001	=1 milligram
0.032 150 74	0.002 679 23	0.002 204 62	1000	1	0.001	=1 gram
32.150 742	2.679 228 5	2.204 622 341	1 000 000	1000	1	=1 kilogram

GREATER THAN AVOIRDUPOIS OUNCES

Long tons	Kilograms	Metric tons	Units
0.000 027 901 79	0.028 349 53	0.000 028 349 53	=1 avoirdupois ounce
0.000 446 428 6	0.453 592 427 7	0.000 453 592 43	=1 avoirdupois pound
0.044 642 86	45.359 243	0.045 359 243	=1 short hundredweight
0.892 857 1	907.184 86	0.907 184 86	=1 short ton
1	1016.047 04	1.016 047 04	=1 long ton
0.000 984 206 4	1	0.001	=1 kilogram
0.984 206 40	1000	1	=1 metric ton

VII. COMPARISON OF METRIC AND CUSTOMARY UNITS FROM 1 TO 9

1. LENGTH

Inches (in.)	Millimeters (mm)	Feet (ft)	Meters (m)	Yards (yd)	Meters (m)	Rods (rd)	Meters (m)	U.S. miles (mi)	Kilometers (km)
1	25.4001	1	0.304 801	1	0.914 402	1	5.029 21	1	1.609 347
2	50.8001	2	0.609 601	2	1.828 804	2	10.058 42	2	3.218 694
3	76.2002	3	0.914 402	3	2.743 205	3	15.087 63	3	4.828 042
4	101.6002	4	1.219 202	4	3.657 607	4	20.116 84	4	6.437 389
5	127.0003	5	1.524 003	5	4.572 009	5	25.146 05	5	8.046 736
6	152.4003	6	1.828 804	6	5.486 411	6	30.175 26	6	9.656 083
7	177.8004	7	2.133 604	7	6.400 813	7	35.204 47	7	11.265 431
8	203.2004	8	2.438 405	8	7.315 215	8	40.233 68	8	12.874 778
9	228.6005	9	2.743 205	9	8.229 616	9	45.262 89	9	14.484 125
0.039 37	1	3.280 83	1	1.093 611	1	0.198 838	1	0.621 370	1
0.078 74	2	6.561 67	2	2.187 222	2	0.397 677	2	1.242 740	2
0.118 11	3	9.842 50	3	3.280 833	3	0.596 515	3	1.864 110	3
0.157 48	4	13.123 33	4	4.374 444	4	0.795 354	4	2.485 480	4
0.196 85	5	16.404 17	5	5.468 056	5	0.994 192	5	3.106 850	5
0.236 22	6	19.685 00	6	6.561 667	6	1.193 030	6	3.728 220	6
0.275 59	7	22.965 83	7	7.655 278	7	1.391 869	7	4.349 590	7
0.314 96	8	26.246 67	8	8.748 889	8	1.590 707	8	4.970 960	8
0.354 33	9	29.527 50	9	9.842 500	9	1.789 545	9	5.592 330	9

2. AREA

Square inches (sq in.)	Square centimeters (cm^2)	Square feet (sq ft)	Square meters (m^2)	Square yards (sq yd)	Square meters (m^2)	Acres (acre)	Hectares (ha)	Square miles (sq mi)	Square kilometers (km^2)
1	6.452	1	0.092 90	1	0.8361	1	0.4047	1	2.5900
2	12.903	2	0.185 81	2	1.6723	2	0.8094	2	5.1800
3	19.355	3	0.278 71	3	2.5084	3	1.2141	3	7.7700
4	25.807	4	0.371 61	4	3.3445	4	1.6187	4	10.3600
5	32.258	5	0.464 52	5	4.1807	5	2.0234	5	12.9500
6	38.710	6	0.557 42	6	5.0168	6	2.4281	6	15.5400
7	45.161	7	0.650 32	7	5.8529	7	2.8328	7	18.1300
8	51.613	8	0.743 23	8	6.6890	8	3.2375	8	20.7200
9	58.065	9	0.836 13	9	7.5252	9	3.6422	9	23.3100
0.155 00	1	10.764	1	1.1960	1	2.471	1	0.3861	1
0.310 00	2	21.528	2	2.3920	2	4.942	2	0.7722	2
0.465 00	3	32.292	3	3.5880	3	7.413	3	1.1583	3
0.620 00	4	43.055	4	4.7839	4	9.884	4	1.5444	4
0.775 00	5	53.819	5	5.9799	5	12.355	5	1.9305	5
0.930 00	6	64.583	6	7.1759	6	14.826	6	2.3166	6
1.085 00	7	75.347	7	8.3719	7	17.297	7	2.7027	7
1.240 00	8	86.111	8	9.5679	8	19.768	8	3.0888	8
1.395 00	9	96.875	9	10.7639	9	22.239	9	3.4749	9

3. VOLUME

Cubic inches (cu in.)	Cubic centimeters (cm^3)	Cubic feet (cu ft)	Cubic meters (m^3)	Cubic yards (cu yd)	Cubic meters (m^3)	Cubic inches (cu in.)	Liters (liter)	Cubic feet (cu ft)	Liters (liter)
1	16.3872	1	0.028 317	1	0.7646	1	0.016 386 7	1	28.316
2	32.7743	2	0.056 634	2	1.5291	2	0.032 773 4	2	56.633
3	49.1615	3	0.084 951	3	2.2937	3	0.049 160 2	3	84.949
4	65.5486	4	0.113 268	4	3.0582	4	0.065 546 9	4	113.265
5	81.9358	5	0.141 585	5	3.8228	5	0.081 933 6	5	141.581
6	98.3230	6	0.169 902	6	4.5874	6	0.098 320 3	6	169.898
7	114.7101	7	0.198 219	7	5.3519	7	0.114 707 0	7	198.214
8	131.0973	8	0.226 536	8	6.1165	8	0.131 093 8	8	226.530
9	147.4845	9	0.254 853	9	6.8810	9	0.147 480 5	9	254.846
0.061 02	1	35.314	1	1.3079	1	61.025	1	0.035 315	1
0.122 05	2	70.629	2	2.6159	2	122.050	2	0.070 631	2
0.183 07	3	105.943	3	3.9238	3	183.075	3	0.105 946	3
0.244 09	4	141.258	4	5.2318	4	244.100	4	0.141 262	4
0.305 12	5	176.572	5	6.5397	5	305.125	5	0.176 577	5
0.366 14	6	211.887	6	7.8477	6	366.150	6	0.211 892	6
0.427 16	7	247.201	7	9.1556	7	427.175	7	0.247 208	7
0.488 19	8	282.516	8	10.4635	8	488.200	8	0.282 523	8
0.549 21	9	317.830	9	11.7715	9	549.225	9	0.317 839	9

4. CAPACITY—LIQUID MEASURE

U. S. fluid drams (fl dr)	Milliliters (ml)	U. S. fluid ounces (fl oz)	Milliliters (ml)	U. S. liquid pints (pt)	Liters (liter)	U. S. liquid quarts (qt)	Liters (liter)	U. S. gallons (gal)	Liters (liter)
1=	3.6966	1=	29.573	1=	0.473 17	1=	0.946 33	1=	3.785 33
2=	7.3932	2=	59.146	2=	0.946 33	2=	1.892 67	2=	7.570 66
3=	11.0898	3=	88.719	3=	1.419 50	3=	2.839 00	3=	11.356 00
4=	14.7865	4=	118.292	4=	1.892 67	4=	3.785 33	4=	15.141 33
5=	18.4831	5=	147.865	5=	2.365 83	5=	4.731 67	5=	18.926 66
6=	22.1797	6=	177.437	6=	2.839 00	6=	5.678 00	6=	22.711 99
7=	25.8763	7=	207.010	7=	3.312 17	7=	6.624 33	7=	26.497 33
8=	29.5729	8=	236.583	8=	3.785 33	8=	7.570 66	8=	30.282 66
9=	33.2695	9=	266.156	9=	4.258 50	9=	8.517 00	9=	34.067 99
0.270 52=1		0.033 815=1		2.1134=1		1.056 71=1		0.264 18=1	
0.541 04=2		0.067 629=2		4.2268=2		2.113 42=2		0.528 36=2	
0.811 55=3		0.101 444=3		6.3403=3		3.170 13=3		0.792 53=3	
1.082 07=4		0.135 259=4		8.4537=4		4.226 84=4		1.056 71=4	
1.352 59=5		0.169 074=5		10.5671=5		5.283 55=5		1.320 89=5	
1.623 11=6		0.202 888=6		12.6805=6		6.340 26=6		1.585 07=6	
1.893 63=7		0.236 703=7		14.7939=7		7.396 97=7		1.849 24=7	
2.164 14=8		0.270 518=8		16.9074=8		8.453 68=8		2.113 42=8	
2.434 66=9		0.304 333=9		19.0208=9		9.510 39=9		2.377 60=9	

5. CAPACITY—DRY MEASURE

U. S. dry quarts (qt)	Liters (liter)	U. S. pecks (pk)	Liters (liter)	U. S. pecks (pk)	Dekaliters (dkl)	U. S. bushels (bu)	Hecto-liters (hl)	U. S. bushels per acre	Hecto-liters per hectare
1=	1.1012	1=	8.810	1=	0.8810	1=	0.352 38	1=	0.8708
2=	2.2024	2=	17.619	2=	1.7619	2=	0.704 77	2=	1.7415
3=	3.3036	3=	26.429	3=	2.6429	3=	1.057 15	3=	2.6123
4=	4.4048	4=	35.238	4=	3.5238	4=	1.409 53	4=	3.4830
5=	5.5060	5=	44.048	5=	4.4048	5=	1.761 92	5=	4.3538
6=	6.6072	6=	52.857	6=	5.2857	6=	2.114 30	6=	5.2245
7=	7.7084	7=	61.667	7=	6.1667	7=	2.466 68	7=	6.0953
8=	8.8096	8=	70.477	8=	7.0477	8=	2.819 07	8=	6.9660
9=	9.9108	9=	79.286	9=	7.9286	9=	3.171 45	9=	7.8368
0.9081=1		0.113 51=1		1.1351=1		2.8378=1		1.1484=1	
1.8162=2		0.227 03=2		2.2703=2		5.6756=2		2.2969=2	
2.7243=3		0.340 54=3		3.4054=3		8.5135=3		3.4453=3	
3.6324=4		0.454 05=4		4.5405=4		11.3513=4		4.5937=4	
4.5405=5		0.567 56=5		5.6756=5		14.1891=5		5.7421=5	
5.4486=6		0.681 08=6		6.8108=6		17.0269=6		6.8906=6	
6.3567=7		0.794 59=7		7.9459=7		19.8647=7		8.0390=7	
7.2648=8		0.908 10=8		9.0810=8		22.7026=8		9.1874=8	
8.1729=9		1.021 61=9		10.2161=9		25.5404=9		10.3359=9	

6. MASS

Grains (grain)	Grams (g)	Apothecaries' drams (dr ap or ʒ)	Grams (g)	Troy ounces (oz t)	Grams (g)	Avoirdupois ounces (oz avdp)	Grams (g)	Avoirdupois pounds (lb avdp)	Kilograms (kg)
1=	0.064 799	1=	3.8879	1=	31.103	1=	28.350	1=	0.453 59
2=	0.129 598	2=	7.7759	2=	62.207	2=	56.699	2=	0.907 18
3=	0.194 397	3=	11.6638	3=	93.310	3=	85.049	3=	1.360 78
4=	0.259 196	4=	15.5517	4=	124.414	4=	113.398	4=	1.814 37
5=	0.323 995	5=	19.4397	5=	155.517	5=	141.748	5=	2.267 96
6=	0.388 794	6=	23.3276	6=	186.621	6=	170.097	6=	2.721 55
7=	0.453 592	7=	27.2155	7=	217.724	7=	198.447	7=	3.175 15
8=	0.518 391	8=	31.1035	8=	248.828	8=	225.796	8=	3.628 74
9=	0.583 190	9=	34.9914	9=	279.931	9=	255.146	9=	4.082 33
15.4324=1		0.257 21=1		0.032 151=1		0.035 274=1		2.204 62=1	
30.8647=2		0.514 41=2		0.064 301=2		0.070 548=2		4.409 24=2	
46.2971=3		0.771 62=3		0.096 452=3		0.105 822=3		6.613 87=3	
61.7294=4		1.028 82=4		0.128 603=4		0.141 096=4		8.818 49=4	
77.1618=5		1.286 03=5		0.160 754=5		0.176 370=5		11.023 11=5	
92.5941=6		1.543 24=6		0.192 904=6		0.211 644=6		13.227 73=6	
108.0265=7		1.800 44=7		0.225 055=7		0.246 918=7		15.432 36=7	
123.4589=8		2.057 65=8		0.257 206=8		0.282 192=8		17.636 98=8	
138.8912=9		2.314 85=9		0.289 357=9		0.317 466=9		19.841 60=9	

22698°—36——3

7. COMPARISON OF THE VARIOUS TONS AND POUNDS IN USE IN THE UNITED STATES (FROM 1 TO 9 UNITS)

Troy pounds	Avoirdupois pounds	Kilograms	Short tons	Long tons	Metric tons
1	0.822 857	0.373 24	0.000 411 43	0.000 367 35	0.000 373 24
2	1.645 71	0.746 48	0.000 822 86	0.000 734 69	0.000 746 48
3	2.468 57	1.119 73	0.001 234 29	0.001 102 04	0.001 119 73
4	3.291 43	1.492 97	0.001 645 71	0.001 469 39	0.001 492 97
5	4.114 29	1.866 21	0.002 057 14	0.001 836 73	0.001 866 21
6	4.937 14	2.239 45	0.002 468 57	0.002 204 08	0.002 239 45
7	5.760 00	2.612 69	0.002 880 00	0.002 571 43	0.002 612 69
8	6.582 86	2.985 93	0.003 291 43	0.002 938 78	0.002 985 93
9	7 405 71	3.359 18	0.003 702 86	0.003 306 12	0.003 359 18
1.215 28	1	0.453 59	0.0005	0.000 446 43	0.000 453 59
2.430 56	2	0.907 18	0.0010	0.000 892 86	0.000 907 18
3.645 83	3	1.360 78	0.0015	0.001 339 29	0.001 360 78
4.861 11	4	1.814 37	0.0020	0.001 785 71	0.001 814 37
6.076 39	5	2.267 96	0.0025	0.002 232 14	0.002 267 96
7.291 67	6	2.721 55	0.0030	0.002 678 57	0.002 721 55
8.506 94	7	3.175 15	0.0035	0.003 125 00	0.003 175 15
9.722 22	8	3.628 74	0.0040	0.003 571 43	0.003 628 74
10.937 50	9	4.082 33	0.0045	0.004 017 86	0.004 082 33
2.679 23	2.204 62	1	0.001 102 31	0.000 984 21	0.001
5.358 46	4.409 24	2	0.002 204 62	0.001 968 41	0.002
8.037 69	6.613 87	3	0.003 306 93	0.002 952 62	0.003
10.716 91	8.818 49	4	0.004 409 24	0.003 936 83	0.004
13.396 14	11.023 11	5	0.005 511 56	0.004 921 03	0.005
16.075 37	13.227 73	6	0.006 613 87	0.005 905 24	0.006
18.754 60	15.432 36	7	0.007 716 18	0.006 889 44	0.007
21.433 83	17.636 98	8	0.008 818 49	0.007 873 65	0.008
24.113 06	19.841 60	9	0.009 920 80	0.008 857 86	0.009
2430.56	2000	907.18	1	0.892 86	0.907 18
4861.11	4000	1814.37	2	1.785 71	1.814 37
7291.67	6000	2721.55	3	2.678 57	2.721 55
9722.22	8000	3628.74	4	3.571 43	3.628 74
12 152.78	10 000	4535.92	5	4.464 29	4.535 92
14 583.33	12 000	5443.11	6	5.357 14	5.443 11
17 013.89	14 000	6350.29	7	6.250 00	6.350 29
19 444.44	16 000	7257.48	8	7.142 86	7.257 48
21 875.00	18 000	8164.66	9	8.035 71	8.164 66
2722.22	2240	1016.05	1.12	1	1.016 05
5444.44	4480	2032.09	2.24	2	2.032 09
8166.67	6720	3048.14	3.36	3	3.048 14
10 888.89	8960	4064.19	4.48	4	4.064 19
13 611.11	11 200	5080.24	5.60	5	5.080 24
16 333.33	13 440	6096.28	6.72	6	6.096 28
19 055.56	15 680	7112.32	7.84	7	7.112 32
21 777.78	17 920	8128.38	8.96	8	8.128 38
24 500.00	20 160	9144.42	10.08	9	9.144 42
2679.23	2204.62	1000	1.102 31	0.984 21	1
5358.46	4409.24	2000	2.204 62	1.968 41	2
8037.69	6613.87	3000	3.306 93	2.952 62	3
10 716.91	8818.49	4000	4.409 24	3.936 83	4
13 396.14	11 023.11	5000	5.511 56	4.921 03	5
16 075.37	13 227.73	6000	6.613 87	5.905 24	6
18 754.60	15 432.36	7000	7.716 18	6.889 44	7
21 433.83	17 636.98	8000	8.818 49	7.873 65	8
24 113.06	19 841.60	9000	9.920 80	8.857 86	9

VIII. SPECIAL TABLES

LENGTH—INCHES AND MILLIMETERS—EQUIVALENTS OF DECIMAL AND BINARY FRACTIONS OF AN INCH IN MILLIMETERS

From 1/64 to 1 Inch

½'s	¼'s	8ths	16ths	32ds	64ths	Milli-meters	Decimals of an inch	Inch	½'s	¼'s	8ths	16ths	32ds	64ths	Milli-meters	Decimals of an inch
					1	= 0.397	0.015625							33	=13.097	0.515625
				1	2	= .794	.03125						17	34	=13.494	.53125
					3	= 1.191	.046875							35	=13.891	.546875
			1	2	4	= 1.588	.0625					9	18	36	=14.288	.5625
					5	= 1.984	.078125							37	=14.684	.578125
				3	6	= 2.381	.09375						19	38	=15.081	.59375
					7	= 2.778	.109375							39	=15.478	.609375
		1	2	4	8	= 3.175	.1250				5	10	20	40	=15.875	.625
					9	= 3.572	.140625							41	=16.272	.640625
				5	10	= 3.969	.15625						21	42	=16.669	.65625
					11	= 4.366	.171875							43	=17.066	.671875
			3	6	12	= 4.763	.1875					11	22	44	=17.463	.6875
					13	= 5.159	.203125							45	=17.859	.703125
				7	14	= 5.556	.21875						23	46	=18.256	.71875
					15	= 5.953	.234375							47	=18.653	.734375
	1	2	4	8	16	= 6.350	.2500			3	6	12	24	48	=19.050	.75
					17	= 6.747	.265625							49	=19.447	.765625
				9	18	= 7.144	.28125						25	50	=19.844	.78125
					19	= 7.541	.296875							51	=20.241	.796875
			5	10	20	= 7.938	.3125					13	26	52	=20.638	.8125
					21	= 8.334	.328125							53	=21.034	.828125
				11	22	= 8.731	.34375						27	54	=21.431	.84375
					23	= 9.128	.359375							55	=21.828	.859375
		3	6	12	24	= 9.525	.3750				7	14	28	56	=22.225	.875
					25	= 9.922	.390625							57	=22.622	.890625
				13	26	=10.319	.40625						29	58	=23.019	.90625
					27	=10.716	.421875							59	=23.416	.921875
			7	14	28	=11.113	.4375					15	30	60	=23.813	.9375
					29	=11.509	.453125							61	=24.209	.953125
				15	30	=11.906	.46875						31	62	=24.606	.96875
					31	=12.303	.484375							63	=25.003	.984375
1	2	4	8	16	32	=12.700	.5	1	2	4	8	16	32	64	=25.400	1.000

LENGTH—HUNDREDTHS OF AN INCH TO MILLIMETERS

From 1 to 99 Hundredths

Hundredths of an inch	0	1	2	3	4	5	6	7	8	9
	0	0.254	0.508	0.762	1.016	1.270	1.524	1.778	2.032	2.286
10	2.540	2.794	3.048	3.302	3.556	3.810	4.064	4.318	4.572	4.826
20	5.080	5.334	5.588	5.842	6.096	6.350	6.604	6.858	7.112	7.366
30	7.620	7.874	8.128	8.382	8.636	8.890	9.144	9.398	9.652	9.906
40	10.160	10.414	10.668	10.922	11.176	11.430	11.684	11.938	12.192	12.446
50	12.700	12.954	13.208	13.462	13.716	13.970	14.224	14.478	14.732	14.986
60	15.240	15.494	15.748	16.002	16.256	16.510	16.764	17.018	17.272	17.526
70	17.780	18.034	18.288	18.542	18.796	19.050	19.304	19.558	19.812	20.066
80	20.320	20.574	20.828	21.082	21.336	21.590	21.844	22.098	22.352	22.606
90	22.860	23.114	23.368	23.622	23.876	24.130	24.384	24.638	24.892	25.146

LENGTH—MILLIMETERS TO DECIMALS OF AN INCH

From 1 to 99 Units

Milli-meters	0	1	2	3	4	5	6	7	8	9
	0	0.03937	0.07874	0.11811	0.15748	0.19685	0.23622	0.27559	0.31496	0.35433
10	0.39370	.43307	.47244	.51181	.55118	.59055	.62992	.66929	.70866	.74803
20	.78740	.82677	.86614	.90551	.94488	.98425	1.02362	1.06299	1.10236	1.14173
30	1.18110	1.22047	1.25984	1.29921	1.33858	1.37795	1.41732	1.45669	1.49606	1.53543
40	1.57480	1.61417	1.65354	1.69291	1.73228	1.77165	1.81102	1.85039	1.88976	1.92913
50	1.96850	2.00787	2.04724	2.08661	2.12598	2.16535	2.20472	2.24409	2.28346	2.32283
60	2.36220	2.40157	2.44094	2.48031	2.51968	2.55905	2.59842	2.63779	2.67716	2.71653
70	2.75590	2.79527	2.83464	2.87401	2.91338	2.95275	2.99212	3.03149	3.07086	3.11023
80	3.14960	3.18897	3.22834	3.26771	3.30708	3.34645	3.38582	3.42519	3.46456	3.50393
90	3.54330	3.58267	3.62204	3.66141	3.70078	3.74015	3.77952	3.81889	3.85826	3.89763

LENGTH—UNITED STATES NAUTICAL MILES, INTERNATIONAL NAUTICAL MILES, AND KILOMETERS

Basic relations:
- 1 U. S. nautical mile=1.853 248 kilometers.
- 1 International nautical mile=1.852 kilometers.
- 1 U. S. nautical mile=1.000 673 9 int. nautical miles.

U. S. nautical miles	Int. nautical miles	Kilometers	U. S. nautical miles	Int. nautical miles	Kilometers	U. S. nautical miles	Int. nautical miles	Kilometers
0				**0**				**0**
1	1.0007	1.8532	0.9993	1	1.8520	0.5396	0.5400	1
2	2.0013	3.7065	1.9987	2	3.7040	1.0792	1.0799	2
3	3.0020	5.5597	2.9980	3	5.5560	1.6188	1.6199	3
4	4.0027	7.4130	3.9973	4	7.4080	2.1584	2.1598	4
5	5.0034	9.2662	4.9966	5	9.2600	2.6980	2.6998	5
6	6.0040	11.1195	5.9960	6	11.1120	3.2376	3.2397	6
7	7.0047	12.9727	6.9953	7	12.9640	3.7772	3.7797	7
8	8.0054	14.8260	7.9946	8	14.8160	4.3167	4.3197	8
9	9.0061	16.6792	8.9939	9	16.6680	4.8563	4.8596	9
10	10.0067	18.5325	9.9933	**10**	18.5200	5.3959	5.3996	**10**
1	11.0074	20.3857	10.9926	1	20.3720	5.9355	5.9395	1
2	12.0081	22.2390	11.9919	2	22.2240	6.4751	6.4795	2
3	13.0088	24.0922	12.9912	3	24.0760	7.0147	7.0194	3
4	14.0094	25.9455	13.9906	4	25.9280	7.5543	7.5594	4
5	15.0101	27.7987	14.9899	5	27.7800	8.0939	8.0994	5
6	16.0108	29.6520	15.9892	6	29.6320	8.6335	8.6393	6
7	17.0115	31.5052	16.9886	7	31.4840	9.1731	9.1793	7
8	18.0121	33.3585	17.9879	8	33.3360	9.7127	9.7192	8
9	19.0128	35.2117	18.9872	9	35.1880	10.2523	10.2592	9
20	20.0135	37.0650	19.9865	**20**	37.0400	10.7919	10.7991	**20**
1	21.0142	38.9182	20.9859	1	38.8920	11.3315	11.3391	1
2	22.0148	40.7715	21.9852	2	40.7440	11.8711	11.8790	2
3	23.0155	42.6247	22.9845	3	42.5960	12.4106	12.4190	3
4	24.0162	44.4780	23.9838	4	44.4480	12.9502	12.9590	4
5	25.0168	46.3312	24.9832	5	46.3000	13.4898	13.4989	5
6	26.0175	48.1844	25.9825	6	48.1520	14.0294	14.0389	6
7	27.0182	50.0377	26.9818	7	50.0040	14.5690	14.5788	7
8	28.0189	51.8909	27.9811	8	51.8560	15.1086	15.1188	8
9	29.0195	53.7442	28.9805	9	53.7080	15.6482	15.6587	9
30	30.0202	55.5974	29.9798	**30**	55.5600	16.1878	16.1987	**30**
1	31.0209	57.4507	30 9791	1	57.4120	16.7274	16.7387	1
2	32.0216	59.3039	31.9785	2	59.2640	17.2670	17.2786	2
3	33.0222	61.1572	32.9778	3	61.1160	17.8066	17.8186	3
4	34.0229	63.0104	33.9771	4	62.9680	18.3462	18.3585	4
5	35.0236	64.8637	34.9764	5	64.8200	18.8858	18.8985	5
6	36.0243	66.7169	35.9758	6	66.6720	19.4254	19.4384	6
7	37.0249	68.5702	36.9751	7	68.5240	19.9649	19.9784	7
8	38.0256	70.4234	37.9744	8	70.3760	20.5045	20.5184	8
9	39.0263	72.2767	38.9737	9	72.2280	21.0441	21.0583	9
40	40.0270	74.1299	39.9731	**40**	74.0800	21.5837	21.5983	**40**
1	41.0276	75.9832	40.9724	1	75.9320	22.1233	22.1382	1
2	42.0283	77.8364	41.9717	2	77.7840	22.6629	22.6782	2
3	43.0290	79.6897	42.9710	3	79.6360	23.2025	23.2181	3
4	44.0297	81.5429	43.9704	4	81.4880	23.7421	23.7581	4
5	45.0303	83.3962	44.9697	5	83.3400	24.2817	24.2981	5
6	46.0310	85.2494	45.9690	6	85.1920	24.8213	24.8380	6
7	47.0317	87.1027	46.9683	7	87.0440	25.3609	25.3780	7
8	48.0323	88.9559	47.9677	8	88.8960	25.9005	25.9179	8
9	49.0330	90.8092	48.9670	9	90.7480	26.4401	26.4579	9

50	50.0337	92.6624	49.9663	**50**	92.6000	26.9797	26.9978	**50**
1	51.0344	94.5156	50.9657	1	94.4520	27.5193	27.5378	1
2	52.0350	96.3689	51.9650	2	96.3040	28.0588	28.0778	2
3	53.0357	98.2221	52.9643	3	98.1560	28.5984	28.6177	3
4	54.0364	100.0754	53.9636	4	100.0080	29.1380	29.1577	4
5	55.0371	101.9286	54.9630	5	101.8600	29.6776	29.6976	5
6	56.0377	103.7819	55.9623	6	103.7120	30.2172	30.2376	6
7	57.0384	105.6351	56.9616	7	105.5640	30.7568	30.7775	7
8	58.0391	107.4884	57.9609	8	107.4160	31.2964	31.3175	8
9	59.0398	109.3416	58.9603	9	109.2680	31.8360	31.8575	9
60	60.0404	111.1949	59.9596	**60**	111.1200	32.3756	32.3974	**60**
1	61.0411	113.0481	60.9589	1	112.9720	32.9152	32.9374	1
2	62.0418	114.9014	61.9582	2	114.8240	33.4548	33.4773	2
3	63.0425	116.7546	62.9576	3	116.6760	33.9944	34.0173	3
4	64.0431	118.6079	63.9569	4	118.5280	34.5340	34.5572	4
5	65.0438	120.4611	64.9562	5	120.3800	35.0736	35.0972	5
6	66.0445	122.3144	65.9556	6	122.2320	35.6132	35.6371	6
7	67.0452	124.1676	66.9549	7	124.0840	36.1527	36.1771	7
8	68.0458	126.0209	67.9542	8	125.9360	36.6923	36.7171	8
9	69.0465	127.8741	68.9535	9	127.7880	37.2319	37.2570	9
70	70.0472	129.7274	69.9529	**70**	129.6400	37.7715	37.7970	**70**
1	71.0478	131.5806	70.9522	1	131.4920	38.3111	38.3369	1
2	72.0485	133.4339	71.9515	2	133.3440	38.8507	38.8769	2
3	73.0492	135.2871	72.9508	3	135.1960	39.3903	39.4168	3
4	74.0499	137.1404	73.9502	4	137.0480	39.9299	39.9568	4
5	75.0505	138.9936	74.9495	5	138.9000	40.4695	40.4968	5
6	76.0512	140.8468	75.9488	6	140.7520	41.0091	41.0367	6
7	77.0519	142.7001	76.9481	7	142.6040	41.5487	41.5767	7
8	78.0526	144.5533	77.9475	8	144.4560	42.0883	42.1166	8
9	79.0532	146.4066	78.9468	9	146.3080	42.6279	42.6566	9
80	80.0539	148.2598	79.9461	**80**	148.1600	43.1675	43.1965	**80**
1	81.0546	150.1131	80.9455	1	150.0120	43.7070	43.7365	1
2	82.0553	151.9663	81.9448	2	151.8640	44.2466	44.2765	2
3	83.0559	153.8196	82.9441	3	153.7160	44.7862	44.8164	3
4	84.0566	155.6728	83.9434	4	155.5680	45.3258	45.3564	4
5	85.0573	157.5261	84.9428	5	157.4200	45.8654	45.8963	5
6	86.0580	159.3793	85.9421	6	159.2720	46.4050	46.4363	6
7	87.0586	161.2326	86.9414	7	161.1240	46.9446	46.9762	7
8	88.0593	163.0858	87.9407	8	162.9760	47.4842	47.5162	8
9	89.0600	164.9391	88.9401	9	164.8280	48.0238	48.0562	9
90	90.0607	166.7923	89.9394	**90**	166.6800	48.5634	48.5961	**90**
1	91.0613	168.6456	90.9387	1	168.5320	49.1030	49.1361	1
2	92.0620	170.4988	91.9380	2	170.3840	49.6426	49.6760	2
3	93.0627	172.3521	92.9374	3	172.2360	50.1822	50.2160	3
4	94.0633	174.2053	93.9367	4	174.0880	50.7218	50.7559	4
5	95.0640	176.0586	94.9360	5	175.9400	51.2614	51.2959	5
6	96.0647	177.9118	95.9354	6	177.7920	51.8009	51.8359	6
7	97.0654	179.7651	96.9347	7	179.6440	52.3405	52.3758	7
8	98.0660	181.6183	97.9340	8	181.4960	52.8801	52.9158	8
9	99.0667	183.4716	98.9333	9	183.3480	53.4197	53.4557	9
100	100.0674	185.3248	99.9327	**100**	185.2000	53.9593	53.9957	**100**

LENGTH—MILLIMETERS TO INCHES

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter=0.03937 inch.]

Millimeters	Hundredths of millimeters									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
0.00	0.000000	0.000394	0.000787	0.001181	0.001575	0.001968	0.002362	0.002756	0.003150	0.003543
0.10	.003937	.004331	.004724	.005118	.005512	.005906	.006299	.006693	.007087	.007480
0.20	.007874	.008268	.008661	.009055	.009449	.009842	.010236	.010630	.011024	.011417
0.30	.011811	.012205	.012598	.012992	.013386	.013780	.014173	.014567	.014961	.015354
0.40	.015748	.016142	.016535	.016929	.017323	.017716	.018110	.018504	.018898	.019291
0.50	0.019685	0.020079	0.020472	0.020866	0.021260	0.021654	0.022047	0.022441	0.022835	0.023228
0.60	.023622	.024016	.024409	.024803	.025197	.025590	.025984	.026378	.026772	.027165
0.70	.027559	.027953	.028346	.028740	.029134	.029528	.029921	.030315	.030709	.031102
0.80	.031496	.031890	.032283	.032677	.033071	.033464	.033858	.034252	.034646	.035039
0.90	.035433	.035827	.036220	.036614	.037008	.037402	.037795	.038189	.038583	.038976
1.00	0.03937	0.03976	0.04016	0.04055	0.04094	0.04134	0.04173	0.04213	0.04252	0.04291
1.10	.04331	.04370	.04409	.04449	.04488	.04528	.04567	.04606	.04646	.04685
1.20	.04724	.04764	.04803	.04843	.04882	.04921	.04961	.05000	.05039	.05079
1.30	.05118	.05157	.05197	.05236	.05276	.05315	.05354	.05394	.05433	.05472
1.40	.05512	.05551	.05591	.05630	.05669	.05709	.05748	.05787	.05827	.05866
1.50	0.05906	0.05945	0.05984	0.06024	0.06063	0.06102	0.06142	0.06181	0.06220	0.06260
1.60	.06299	.06339	.06378	.06417	.06457	.06496	.06535	.06575	.06614	.06654
1.70	.06693	.06732	.06772	.06811	.06850	.06890	.06929	.06968	.07008	.07047
1.80	.07087	.07126	.07165	.07205	.07244	.07283	.07323	.07362	.07402	.07441
1.90	.07480	.07520	.07559	.07598	.07638	.07677	.07717	.07756	.07795	.07835
2.00	0.07874	0.07913	0.07953	0.07992	0.08031	0.08071	0.08110	0.08150	0.08189	0.08228
2.10	.08268	.08307	.08346	.08386	.08425	.08465	.08504	.08543	.08583	.08622
2.20	.08661	.08701	.08740	.08780	.08819	.08858	.08898	.08937	.08976	.09016
2.30	.09055	.09094	.09134	.09173	.09213	.09252	.09291	.09331	.09370	.09409
2.40	.09449	.09488	.09528	.09567	.09606	.09646	.09685	.09724	.09764	.09803

2.50	0.09842	0.09882	0.09921	0.09961	0.10000	0.10039	0.10079	0.10118	0.10157	0.10197
2.60	.10236	.10276	.10315	.10354	.10394	.10433	.10472	.10512	.10551	.10591
2.70	.10630	.10669	.10709	.10748	.10787	.10827	.10866	.10905	.10945	.10984
2.80	.11024	.11063	.11102	.11142	.11181	.11220	.11260	.11299	.11339	.11378
2.90	.11417	.11457	.11496	.11535	.11575	.11614	.11654	.11693	.11732	.11772
3.00	0.11811	0.11850	0.11890	0.11929	0.11968	0.12008	0.12047	0.12087	0.12126	0.12165
3.10	.12205	.12244	.12283	.12323	.12362	.12402	.12441	.12480	.12520	.12559
3.20	.12598	.12638	.12677	.12717	.12756	.12795	.12835	.12874	.12913	.12953
3.30	.12992	.13031	.13071	.13110	.13150	.13189	.13228	.13268	.13307	.13346
3.40	.13386	.13425	.13465	.13504	.13543	.13583	.13622	.13661	.13701	.13740
3.50	0.13780	0.13819	0.13858	0.13898	0.13937	0.13976	0.14016	0.14055	0.14094	0.14134
3.60	.14173	.14213	.14252	.14291	.14331	.14370	.14409	.14449	.14488	.14528
3.70	.14567	.14606	.14646	.14685	.14724	.14764	.14803	.14842	.14882	.14921
3.80	.14961	.15000	.15039	.15079	.15118	.15157	.15197	.15236	.15276	.15315
3.90	.15354	.15394	.15433	.15472	.15512	.15551	.15591	.15630	.15669	.15709
4.00	0.15748	0.15787	0.15827	0.15866	0.15905	0.15945	0.15984	0.16024	0.16063	0.16102
4.10	.16142	.16181	.16220	.16260	.16299	.16339	.16378	.16417	.16457	.16496
4.20	.16535	.16575	.16614	.16654	.16693	.16732	.16772	.16811	.16850	.16890
4.30	.16929	.16968	.17008	.17047	.17087	.17126	.17165	.17205	.17244	.17283
4.40	.17323	.17362	.17402	.17441	.17480	.17520	.17559	.17598	.17638	.17677
4.50	0.17716	0.17756	0.17795	0.17835	0.17874	0.17913	0.17953	0.17992	0.18031	0.18071
4.60	.18110	.18150	.18189	.18228	.18268	.18307	.18346	.18386	.18425	.18465
4.70	.18504	.18543	.18583	.18622	.18661	.18701	.18740	.18779	.18819	.18858
4.80	.18898	.18937	.18976	.19016	.19055	.19094	.19134	.19173	.19213	.19252
4.90	.19291	.19331	.19370	.19409	.19449	.19488	.19528	.19567	.19606	.19646
5.00	0.19685	0.19724	0.19764	0.19803	0.19842	0.19882	0.19921	0.19961	0.20000	0.20039
5.10	.20079	.20118	.20157	.20197	.20236	.20276	.20315	.20354	.20394	.20433
5.20	.20472	.20512	.20551	.20591	.20630	.20669	.20709	.20748	.20787	.20827
5.30	.20866	.20905	.20945	.20984	.21024	.21063	.21102	.21142	.21181	.21220
5.40	.21260	.21299	.21339	.21378	.21417	.21457	.21496	.21535	.21575	.21614
5.50	0.21654	0.21693	0.21732	0.21772	0.21811	0.21850	0.21890	0.21929	0.21968	0.22008
5.60	.22047	.22087	.22126	.22165	.22205	.22244	.22283	.22323	.22362	.22402
5.70	.22441	.22480	.22520	.22559	.22598	.22638	.22677	.22716	.22756	.22795
5.80	.22835	.22874	.22913	.22953	.22992	.23031	.23071	.23110	.23150	.23189
5.90	.23228	.23268	.23307	.23346	.23386	.23425	.23465	.23504	.23543	.23583

LENGTH—MILLIMETERS TO INCHES—Continued

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter=0.03937 inch.]

Millimeters	Hundredths of millimeters									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
6.00	0.23622	0.23661	0.23701	0.23740	0.23779	0.23819	0.23858	0.23898	0.23937	0.23976
6.10	.24016	.24055	.24094	.24134	.24173	.24213	.24252	.24291	.24331	.24370
6.20	.24409	.24449	.24488	.24528	.24567	.24606	.24646	.24685	.24724	.24764
6.30	.24803	.24842	.24882	.24921	.24961	.25000	.25039	.25079	.25118	.25157
6.40	.25197	.25236	.25276	.25315	.25354	.25394	.25433	.25472	.25512	.25551
6.50	0.25590	0.25630	0.25669	0.25709	0.25748	0.25787	0.25827	0.25866	0.25905	0.25945
6.60	.25984	.26024	.26063	.26102	.26142	.26181	.26220	.26260	.26299	.26339
6.70	.26378	.26417	.26457	.26496	.26535	.26575	.26614	.26653	.26693	.26732
6.80	.26772	.26811	.26850	.26890	.26929	.26968	.27008	.27047	.27087	.27126
6.90	.27165	.27205	.27244	.27283	.27323	.27362	.27402	.27441	.27480	.27520
7.00	0.27559	0.27598	0.27638	0.27677	0.27716	0.27756	0.27795	0.27835	0.27874	0.27913
7.10	.27953	.27992	.28031	.28071	.28110	.28150	.28189	.28228	.28268	.28307
7.20	.28346	.28386	.28425	.28465	.28504	.28543	.28583	.28622	.28661	.28701
7.30	.28740	.28779	.28819	.28858	.28898	.28937	.28976	.29016	.29055	.29094
7.40	.29134	.29173	.29213	.29252	.29291	.29331	.29370	.29409	.29449	.29488
7.50	0.29528	0.29567	0.29606	0.29646	0.29685	0.29724	0.29764	0.29803	0.29842	0.29882
7.60	.29921	.29961	.30000	.30039	.30079	.30118	.30157	.30197	.30236	.30276
7.70	.30315	.30354	.30394	.30433	.30472	.30512	.30551	.30590	.30630	.30669
7.80	.30709	.30748	.30787	.30827	.30866	.30905	.30945	.30984	.31024	.31063
7.90	.31102	.31142	.31181	.31220	.31260	.31299	.31339	.31378	.31417	.31457
8.00	0.31496	0.31535	0.31575	0.31614	0.31653	0.31693	0.31732	0.31772	0.31811	0.31850
8.10	.31890	.31929	.31968	.32008	.32047	.32087	.32126	.32165	.32205	.32244
8.20	.32283	.32323	.32362	.32402	.32441	.32480	.32520	.32559	.32598	.32638
8.30	.32677	.32716	.32756	.32795	.32835	.32874	.32913	.32953	.32992	.33031
8.40	.33071	.33110	.33150	.33189	.33228	.33268	.33307	.33346	.33386	.33425

8.50	0.33464	0.33504	0.33543	0.33583	0.33622	0.33661	0.33701	0.33740	0.33779	0.33819
8.60	.33858	.33898	.33937	.33976	.34016	.34055	.34094	.34134	.34173	.34213
8.70	.34252	.34291	.34331	.34370	.34409	.34449	.34488	.34527	.34567	.34606
8.80	.34646	.34685	.34724	.34764	.34803	.34842	.34882	.34921	.34961	.35000
8.90	.35039	.35079	.35118	.35157	.35197	.35236	.35276	.35315	.35354	.35394
9.00	0.35433	0.35472	0.35512	0.35551	0.35590	0.35630	0.35669	0.35709	0.35748	0.35787
9.10	.35827	.35866	.35905	.35945	.35984	.36024	.36063	.36102	.36142	.36181
9.20	.36220	.36260	.36299	.36339	.36378	.36417	.36457	.36496	.36535	.36575
9.30	.36614	.36653	.36693	.36732	.36772	.36811	.36850	.36890	.36929	.36968
9.40	.37008	.37047	.37087	.37126	.37165	.37205	.37244	.37283	.37323	.37362
9.50	0.37402	0.37441	0.37480	0.37520	0.37559	0.37598	0.37638	0.37677	0.37716	0.37756
9.60	.37795	.37835	.37874	.37913	.37953	.37992	.38031	.38071	.38110	.38150
9.70	.38189	.38228	.38268	.38307	.38346	.38386	.38425	.38464	.38504	.38543
9.80	.38583	.38622	.38661	.38701	.38740	.38779	.38819	.38858	.38898	.38937
9.90	.38976	.39016	.39055	.39094	.39134	.39173	.39213	.39252	.39291	.39331
10.00	0.39370	0.39409	0.39449	0.39488	0.39527	0.39567	0.39606	0.39646	0.39685	0.39724
10.10	.39764	.39803	.39842	.39882	.39921	.39961	.40000	.40039	.40079	.40118
10.20	.40157	.40197	.40236	.40276	.40315	.40354	.40394	.40433	.40472	.40512
10.30	.40551	.40590	.40630	.40669	.40709	.40748	.40787	.40827	.40866	.40905
10.40	.40945	.40984	.41024	.41063	.41102	.41142	.41181	.41220	.41260	.41299
10.50	0.41338	0.41378	0.41417	0.41457	0.41496	0.41535	0.41575	0.41614	0.41653	0.41693
10.60	.41732	.41772	.41811	.41850	.41890	.41929	.41968	.42008	.42047	.42087
10.70	.42126	.42165	.42205	.42244	.42283	.42323	.42362	.42401	.42441	.42480
10.80	.42520	.42559	.42598	.42638	.42677	.42716	.42756	.42795	.42835	.42874
10.90	.42913	.42953	.42992	.43031	.43071	.43110	.43150	.43189	.43228	.43268
11.00	0.43307	0.43346	0.43386	0.43425	0.43464	0.43504	0.43543	0.43583	0.43622	0.43661
11.10	.43701	.43740	.43779	.43819	.43858	.43898	.43937	.43976	.44016	.44055
11.20	.44094	.44134	.44173	.44213	.44252	.44291	.44331	.44370	.44409	.44449
11.30	.44488	.44527	.44567	.44606	.44646	.44685	.44724	.44764	.44803	.44842
11.40	.44882	.44921	.44961	.45000	.45039	.45079	.45118	.45157	.45197	.45236
11.50	0.45276	0.45315	0.45354	0.45394	0.45433	0.45472	0.45512	0.45551	0.45590	0.45630
11.60	.45669	.45709	.45748	.45787	.45827	.45866	.45905	.45945	.45984	.46024
11.70	.46063	.46102	.46142	.46181	.46220	.46260	.46299	.46338	.46378	.46417
11.80	.46457	.46496	.46535	.46575	.46614	.46653	.46693	.46732	.46772	.46811
11.90	.46850	.46890	.46929	.46968	.47008	.47047	.47087	.47126	.47165	.47205

22698°—36——4

LENGTH—MILLIMETERS TO INCHES—Continued.

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter=0.03937 inch.]

Millimeters	Hundredths of millimeters									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
12.00	0. 47244	0. 47283	0. 47323	0. 47362	0. 47401	0. 47441	0. 47480	0. 47520	0. 47559	0. 47598
12. 10	. 47638	. 47677	. 47716	. 47756	. 47795	. 47835	. 47874	. 47913	. 47953	. 47992
12. 20	. 48031	. 48071	. 48110	. 48150	. 48189	. 48228	. 48268	. 48307	. 48346	. 48386
12. 30	. 48425	. 48464	. 48504	. 48543	. 48583	. 48622	. 48661	. 48701	. 48740	. 48779
12. 40	. 48819	. 48858	. 48898	. 48937	. 48976	. 49016	. 49055	. 49094	. 49134	. 49173
12.50	0. 49212	0. 49252	0. 49291	0. 49331	0. 49370	0. 49409	0. 49449	0. 49488	0. 49527	0. 49567
12. 60	. 49606	. 49646	. 49685	. 49724	. 49764	. 49803	. 49842	. 49882	. 49921	. 49961
12. 70	. 50000	. 50039	. 50079	. 50118	. 50157	. 50197	. 50236	. 50275	. 50315	. 50354
12. 80	. 50394	. 50433	. 50472	. 50512	. 50551	. 50590	. 50630	. 50669	. 50709	. 50748
12. 90	. 50787	. 50827	. 50866	. 50905	. 50945	. 50984	. 51024	. 51063	. 51102	. 51142
13.00	0. 51181	0. 51220	0. 51260	0. 51299	0. 51338	0. 51378	0. 51417	0. 51457	0. 51496	0. 51535
13. 10	. 51575	. 51614	. 51653	. 51693	. 51732	. 51772	. 51811	. 51850	. 51890	. 51929
13. 20	. 51968	. 52008	. 52047	. 52087	. 52126	. 52165	. 52205	. 52244	. 52283	. 52323
13. 30	. 52362	. 52401	. 52441	. 52480	. 52520	. 52559	. 52598	. 52638	. 52677	. 52716
13. 40	. 52756	. 52795	. 52835	. 52874	. 52913	. 52953	. 52992	. 53031	. 53071	. 53110
13.50	0. 53150	0. 53189	0. 53228	0. 53268	0. 53307	0. 53346	0. 53386	0. 53425	0. 53464	0. 53504
13. 60	. 53543	. 53583	. 53622	. 53661	. 53701	. 53740	. 53779	. 53819	. 53858	. 53898
13. 70	. 53937	. 53976	. 54016	. 54055	. 54094	. 54134	. 54173	. 54212	. 54252	. 54291
13. 80	. 54331	. 54370	. 54409	. 54449	. 54488	. 54527	. 54567	. 54606	. 54646	. 54685
13. 90	. 54724	. 54764	. 54803	. 54842	. 54882	. 54921	. 54961	. 55000	. 55039	. 55079
14.00	0. 55118	0. 55157	0. 55197	0. 55236	0. 55275	0. 55315	0. 55354	0. 55394	0. 55433	0. 55472
14. 10	. 55512	. 55551	. 55590	. 55630	. 55669	. 55709	. 55748	. 55787	. 55827	. 55866
14. 20	. 55905	. 55945	. 55984	. 56024	. 56063	. 56102	. 56142	. 56181	. 56220	. 56260
14. 30	. 56299	. 56338	. 56378	. 56417	. 56457	. 56496	. 56535	. 56575	. 56614	. 56653
14. 40	. 56693	. 56732	. 56772	. 56811	. 56850	. 56890	. 56929	. 56968	. 57008	. 57047

14.50	0.57086	0.57126	0.57165	0.57205	0.57244	0.57283	0.57323	0.57362	0.57401	.57441
14.60	.57480	.57520	.57559	.57598	.57638	.57677	.57716	.57756	.57795	.57835
14.70	.57874	.57913	.57953	.57992	.58031	.58071	.58110	.58149	.58189	.58228
14.80	.58268	.58307	.58346	.58386	.58425	.58464	.58504	.58543	.58583	.58622
14.90	.58661	.58701	.58740	.58779	.58819	.58858	.58898	.58937	.58976	.59016
15.00	0.59055	0.59094	0.59134	0.59173	0.59212	0.59252	0.59291	0.59331	0.59370	0.59409
15.10	.59449	.59488	.59527	.59567	.59606	.59646	.59685	.59724	.59764	.59803
15.20	.59842	.59882	.59921	.59961	.60000	.60039	.60079	.60118	.60157	.60197
15.30	.60236	.60275	.60315	.60354	.60394	.60433	.60472	.60512	.60551	.60590
15.40	.60630	.60669	.60709	.60748	.60787	.60827	.60866	.60905	.60945	.60984
15.50	0.61024	0.61063	0.61102	0.61142	0.61181	0.61220	0.61260	0.61299	0.61338	0.61378
15.60	.61417	.61457	.61496	.61535	.61575	.61614	.61653	.61693	.61732	.61772
15.70	.61811	.61850	.61890	.61929	.61968	.62008	.62047	.62086	.62126	.62165
15.80	.62205	.62244	.62283	.62323	.62362	.62401	.62441	.62480	.62520	.62559
15.90	.62598	.62638	.62677	.62716	.62756	.62795	.62835	.62874	.62913	.62953
16.00	0.62992	0.63031	0.63071	0.63110	0.63149	0.63189	0.63228	0.63268	0.63307	0.63346
16.10	.63386	.63425	.63464	.63504	.63543	.63583	.63622	.63661	.63701	.63740
16.20	.63779	.63819	.63858	.63898	.63937	.63976	.64016	.64055	.64094	.64134
16.30	.64173	.64212	.64252	.64291	.64331	.64370	.64409	.64449	.64488	.64527
16.40	.64567	.64606	.64646	.64685	.64724	.64764	.64803	.64842	.64882	.64921
16.50	0.64960	0.65000	0.65039	0.65079	0.65118	0.65157	0.65197	0.65236	0.65275	0.65315
16.60	.65354	.65394	.65433	.65472	.65512	.65551	.65590	.65630	.65669	.65709
16.70	.65748	.65787	.65827	.65866	.65905	.65945	.65984	.66023	.66063	.66102
16.80	.66142	.66181	.66220	.66260	.66299	.66338	.66378	.66417	.66457	.66496
16.90	.66535	.66575	.66614	.66653	.66693	.66732	.66772	.66811	.66850	.66890
17.00	0.66929	0.66968	0.67008	0.67047	0.67086	0.67126	0.67165	0.67205	0.67244	0.67283
17.10	.67323	.67362	.67401	.67441	.67480	.67520	.67559	.67598	.67638	.67677
17.20	.67716	.67756	.67795	.67835	.67874	.67913	.67953	.67992	.68031	.68071
17.30	.68110	.68149	.68189	.68228	.68268	.68307	.68346	.68386	.68425	.68464
17.40	.68504	.68543	.68583	.68622	.68661	.68701	.68740	.68779	.68819	.68858
17.50	0.68898	0.68937	0.68976	0.69016	0.69055	0.69094	0.69134	0.69173	0.69212	0.69252
17.60	.69291	.69331	.69370	.69409	.69449	.69488	.69527	.69567	.69606	.69646
17.70	.69685	.69724	.69764	.69803	.69842	.69882	.69921	.69960	.70000	.70039
17.80	.70079	.70118	.70157	.70197	.70236	.70275	.70315	.70354	.70394	.70433
17.90	.70472	.70512	.70551	.70590	.70630	.70669	.70709	.70748	.70787	.70827

LENGTH—MILLIMETERS TO INCHES—Continued

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter=0.03937 inch.]

Millimeters	Hundredths of millimeters									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
18.00	0.70866	0.70905	0.70945	0.70984	0.71023	0.71063	0.71102	0.71142	0.71181	0.71220
18.10	.71260	.71299	.71338	.71378	.71417	.71457	.71496	.71535	.71575	.71614
18.20	.71653	.71693	.71732	.71772	.71811	.71850	.71890	.71929	.71968	.72008
18.30	.72047	.72086	.72126	.72165	.72205	.72244	.72283	.72323	.72362	.72401
18.40	.72441	.72480	.72520	.72559	.72598	.72638	.72677	.72716	.72756	.72795
18.50	0.72834	0.72874	0.72913	0.72953	0.72992	0.73031	0.73071	0.73110	0.73149	0.73189
18.60	.73228	.73268	.73307	.73346	.73386	.73425	.73464	.73504	.73543	.73583
18.70	.73622	.73661	.73701	.73740	.73779	.73819	.73858	.73897	.73937	.73976
18.80	.74016	.74055	.74094	.74134	.74173	.74212	.74252	.74291	.74331	.74370
18.90	.74409	.74449	.74488	.74527	.74567	.74606	.74646	.74685	.74724	.74764
19.00	0.74803	0.74842	0.74882	0.74921	0.74960	0.75000	0.75039	0.75079	0.75118	0.75157
19.10	.75197	.75236	.75275	.75315	.75354	.75394	.75433	.75472	.75512	.75551
19.20	.75590	.75630	.75669	.75709	.75748	.75787	.75827	.75866	.75905	.75945
19.30	.75984	.76023	.76063	.76102	.76142	.76181	.76220	.76260	.76299	.76338
19.40	.76378	.76417	.76457	.76496	.76535	.76575	.76614	.76653	.76693	.76732
19.50	0.76772	0.76811	0.76850	0.76890	0.76929	0.76968	0.77008	0.77047	0.77086	0.77126
19.60	.77165	.77205	.77244	.77283	.77323	.77362	.77401	.77441	.77480	.77520
19.70	.77559	.77598	.77638	.77677	.77716	.77756	.77795	.77834	.77874	.77913
19.80	.77953	.77992	.78031	.78071	.78110	.78149	.78189	.78228	.78268	.78307
19.90	.78346	.78386	.78425	.78464	.78504	.78543	.78583	.78622	.78661	.78701
20.00	0.78740	0.78779	0.78819	0.78858	0.78897	0.78937	0.78976	0.79016	0.79055	0.79094
20.10	.79134	.79173	.79212	.79252	.79291	.79331	.79370	.79409	.79449	.79488
20.20	.79527	.79567	.79606	.79646	.79685	.79724	.79764	.79803	.79842	.79882
20.30	.79921	.79960	.80000	.80039	.80079	.80118	.80157	.80197	.80236	.80275
20.40	.80315	.80354	.80394	.80433	.80472	.80512	.80551	.80590	.80630	.80669

20.50	0. 80708	0. 80748	0. 80787	0. 80827	0. 80866	0. 80905	0. 80945	0. 80984	0. 81023	0. 81063
20. 60	. 81102	. 81142	. 81181	. 81220	. 81260	. 81299	. 81338	. 81378	. 81417	. 81457
20. 70	. 81496	. 81535	. 81575	. 81614	. 81653	. 81693	. 81732	. 81771	. 81811	. 81850
20. 80	. 81890	. 81929	. 81968	. 82008	. 82047	. 82086	. 82126	. 82165	. 82205	. 82244
20. 90	. 82283	. 82323	. 82362	. 82401	. 82441	. 82480	. 82520	. 82559	. 82598	. 82638
21.00	0. 82677	0. 82716	0. 82756	0. 82795	0. 82834	0. 82874	0. 82913	0. 82953	0. 82992	0. 83031
21. 10	. 83071	. 83110	. 83149	. 83189	. 83228	. 83268	. 83307	. 83346	. 83386	. 83425
21. 20	. 83464	. 83504	. 83543	. 83583	. 83622	. 83661	. 83701	. 83740	. 83779	. 83819
21. 30	. 83858	. 83897	. 83937	. 83976	. 84016	. 84055	. 84094	. 84134	. 84173	. 84212
21. 40	. 84252	. 84291	. 84331	. 84370	. 84409	. 84449	. 84488	. 84527	. 84567	. 84606
21.50	0. 84646	0. 84685	0. 84724	0. 84764	0. 84803	0. 84842	0. 84882	0. 84921	0. 84960	0. 85000
21. 60	. 85039	. 85079	. 85118	. 85157	. 85197	. 85236	. 85275	. 85315	. 85354	. 85394
21. 70	. 85433	. 85472	. 85512	. 85551	. 85590	. 85630	. 85669	. 85708	. 85748	. 85787
21. 80	. 85827	. 85866	. 85905	. 85945	. 85984	. 86023	. 86063	. 86102	. 86142	. 86181
21. 90	. 86220	. 86260	. 86299	. 86338	. 86378	. 86417	. 86457	. 86496	. 86535	. 86575
22.00	0. 86614	0. 86653	0. 86693	0. 86732	0. 86771	0. 86811	0. 86850	0. 86890	0. 86929	0. 86968
22. 10	. 87008	. 87047	. 87086	. 87126	. 87165	. 87205	. 87244	. 87283	. 87323	. 87362
22. 20	. 87401	. 87441	. 87480	. 87520	. 87559	. 87598	. 87638	. 87677	. 87716	. 87756
22. 30	. 87795	. 87834	. 87874	. 87913	. 87953	. 87992	. 88031	. 88071	. 88110	. 88149
22. 40	. 88189	. 88228	. 88268	. 88307	. 88346	. 88386	. 88425	. 88464	. 88504	. 88543
22.50	0. 88582	0. 88622	0. 88661	0. 88701	0. 88740	0. 88779	0. 88819	0. 88858	0. 88897	0. 88937
22. 60	. 88976	. 89016	. 89055	. 89094	. 89134	. 89173	. 89212	. 89252	. 89291	. 89331
22. 70	. 89370	. 89409	. 89449	. 89488	. 89527	. 89567	. 89606	. 89645	. 89685	. 89724
22. 80	. 89764	. 89803	. 89842	. 89882	. 89921	. 89960	. 90000	. 90039	. 90079	. 90118
22. 90	. 90157	. 90197	. 90236	. 90275	. 90315	. 90354	. 90394	. 90433	. 90472	. 90512
23.00	0. 90551	0. 90590	0. 90630	0. 90669	0. 90708	0. 90748	0. 90787	0. 90827	0. 90866	0. 90905
23. 10	. 90945	. 90984	. 91023	. 91063	. 91102	. 91142	. 91181	. 91220	. 91260	. 91299
23. 20	. 91338	. 91378	. 91417	. 91457	. 91496	. 91535	. 91575	. 91614	. 91653	. 91693
23. 30	. 91732	. 91771	. 91811	. 91850	. 91890	. 91929	. 91968	. 92008	. 92047	. 92086
23. 40	. 92126	. 92165	. 92205	. 92244	. 92283	. 92323	. 92362	. 92401	. 92441	. 92480
23.50	0. 92520	0. 92559	0. 92598	0. 92638	0. 92677	0. 92716	0. 92756	0. 92795	0. 92834	0. 92874
23. 60	. 92913	. 92953	. 92992	. 93031	. 93071	. 93110	. 93149	. 93189	. 93228	. 93268
23. 70	. 93307	. 93346	. 93386	. 93425	. 93464	. 93504	. 93543	. 93582	. 93622	. 93661
23. 80	. 93701	. 93740	. 93779	. 93819	. 93858	. 93897	. 93937	. 93976	. 94016	. 94055
23. 90	. 94094	. 94134	. 94173	. 94212	. 94252	. 94291	. 94331	. 94370	. 94409	. 94449

LENGTH—MILLIMETERS TO INCHES—Continued

[From 0.00 to 25.40 millimeters by 0.01 millimeter 1 millimeter=0.03937 inch.]

Millimeters	Hundredths of millimeters									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
24.00	0.94488	0.94527	0.94567	0.94606	0.94645	0.94685	0.94724	0.94764	0.94803	0.94842
24.10	.94882	.94921	.94960	.95000	.95039	.95079	.95118	.95157	.95197	.95236
24.20	.95275	.95315	.95354	.95394	.95433	.95472	.95512	.95551	.95590	.95630
24.30	.95669	.95708	.95748	.95787	.95827	.95866	.95905	.95945	.95984	.96023
24.40	.96063	.96102	.96142	.96181	.96220	.96260	.96299	.96338	.96378	.96417
24.50	0.96456	0.96496	0.96535	0.96575	0.96614	0.96653	0.96693	0.96732	0.96771	0.96811
24.60	.96850	.96890	.96929	.96968	.97008	.97047	.97086	.97126	.97165	.97205
24.70	.97244	.97283	.97323	.97362	.97401	.97441	.97480	.97519	.97559	.97598
24.80	.97638	.97677	.97716	.97756	.97795	.97834	.97874	.97913	.97953	.97992
24.90	.98031	.98071	.98110	.98149	.98189	.98228	.98268	.98307	.98346	.98386
25.00	0.98425	0.98464	0.98504	0.98543	0.98582	0.98622	0.98661	0.98701	0.98740	0.98779
25.10	.98819	.98858	.98897	.98937	.98976	.99016	.99055	.99094	.99134	.99173
25.20	.99212	.99252	.99291	.99331	.99370	.99409	.99449	.99488	.99527	.99567
25.30	.99606	.99645	.99685	.99724	.99764	.99803	.99842	.99882	.99921	.99960
25.40	1.00000	.....	.....	.....	.....	.....	.....	.....	.....	.....

IX. TABLES OF EQUIVALENTS FROM 1 TO 999 UNITS

LENGTH—FEET TO METERS

[Reduction factor: 1 foot = 0.3048006096 meter]

Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
0		100	30.48006	200	60.96012	300	91.44018	400	121.92024	500	152.40030	600	182.88037	700	213.36043	800	243.84049	900	274.32055
1	0.30480	1	30.78486	1	61.26492	1	91.74498	1	122.22504	1	152.70511	1	183.18517	1	213.66523	1	244.14529	1	274.62535
2	.60960	2	31.08966	2	61.56972	2	92.04978	2	122.52985	2	153.00991	2	183.48997	2	213.97003	2	244.45009	2	274.93015
3	.91440	3	31.39446	3	61.87452	3	92.35458	3	122.83465	3	153.31471	3	183.79477	3	214.27483	3	244.75489	3	275.23495
4	1.21920	4	31.69926	4	62.17932	4	92.65939	4	123.13945	4	153.61951	4	184.09957	4	214.57963	4	245.05969	4	275.53975
5	1.52400	5	32.00406	5	62.48412	5	92.96419	5	123.44425	5	153.92431	5	184.40437	5	214.88443	5	245.36449	5	275.84455
6	1.82880	6	32.30886	6	62.78893	6	93.26899	6	123.74905	6	154.22911	6	184.70917	6	215.18923	6	245.66929	6	276.14935
7	2.13360	7	32.61367	7	63.09373	7	93.57379	7	124.05385	7	154.53391	7	185.01397	7	215.49403	7	245.97409	7	276.45415
8	2.43840	8	32.91847	8	63.39853	8	93.87859	8	124.35865	8	154.83871	8	185.31877	8	215.79883	8	246.27889	8	276.75895
9	2.74321	9	33.22327	9	63.70333	9	94.18339	9	124.66345	9	155.14351	9	185.62357	9	216.10363	9	246.58369	9	277.06375
10	3.04801	110	33.52807	210	64.00813	310	94.48819	410	124.96825	510	155.44831	610	185.92837	710	216.40843	810	246.88849	910	277.36855
1	3.35281	1	33.83287	1	64.31293	1	94.79299	1	125.27305	1	155.75311	1	186.23317	1	216.71323	1	247.19329	1	277.67336
2	3.65761	2	34.13767	2	64.61773	2	95.09779	2	125.57785	2	156.05791	2	186.53797	2	217.01803	2	247.49809	2	277.97816
3	3.96241	3	34.44247	3	64.92253	3	95.40259	3	125.88265	3	156.36271	3	186.84277	3	217.32283	3	247.80290	3	278.28296
4	4.26721	4	34.74727	4	65.22733	4	95.70739	4	126.18745	4	156.66751	4	187.14757	4	217.62764	4	248.10770	4	278.58776
5	4.57201	5	35.05207	5	65.53213	5	96.01219	5	126.49225	5	156.97231	5	187.45237	5	217.93244	5	248.41250	5	278.89256
6	4.87681	6	35.35687	6	65.83693	6	96.31699	6	126.79705	6	157.27711	6	187.75718	6	218.23724	6	248.71730	6	279.19736
7	5.18161	7	35.66167	7	66.14173	7	96.62179	7	127.10185	7	157.58192	7	188.06198	7	218.54204	7	249.02210	7	279.50216
8	5.48641	8	35.96647	8	66.44653	8	96.92659	8	127.40665	8	157.88672	8	188.36678	8	218.84684	8	249.32690	8	279.80696
9	5.79121	9	36.27127	9	66.75133	9	97.23139	9	127.71146	9	158.19152	9	188.67158	9	219.15164	9	249.63170	9	280.11176
20	6.09601	120	36.57607	220	67.05613	320	97.53620	420	128.01626	520	158.49632	620	188.97638	720	219.45644	820	249.93650	920	280.41656
1	6.40081	1	36.88087	1	67.36093	1	97.84100	1	128.32106	1	158.80112	1	189.28118	1	219.76124	1	250.24130	1	280.72136
2	6.70561	2	37.18567	2	67.66574	2	98.14580	2	128.62586	2	159.10592	2	189.58598	2	220.06604	2	250.54610	2	281.02616
3	7.01041	3	37.49047	3	67.97054	3	98.45060	3	128.93066	3	159.41072	3	189.89078	3	220.37084	3	250.85090	3	281.33096
4	7.31521	4	37.79528	4	68.27534	4	98.75540	4	129.23546	4	159.71552	4	190.19558	4	220.67564	4	251.15570	4	281.63576
5	7.62002	5	38.10008	5	68.58014	5	99.06020	5	129.54026	5	160.02032	5	190.50038	5	220.98044	5	251.46050	5	281.94056
6	7.92482	6	38.40488	6	68.88494	6	99.36500	6	129.84506	6	160.32512	6	190.80518	6	221.28524	6	251.76530	6	282.24536
7	8.22962	7	38.70968	7	69.18974	7	99.66980	7	130.14986	7	160.62992	7	191.10998	7	221.59004	7	252.07010	7	282.55017
8	8.53442	8	39.01448	8	69.49454	8	99.97460	8	130.45466	8	160.93472	8	191.41478	8	221.89484	8	252.37490	8	282.85497
9	8.83922	9	39.31928	9	69.79934	9	100.27940	9	130.75946	9	161.23952	9	191.71958	9	222.19964	9	252.67971	9	283.15977
30	9.14402	130	39.62408	230	70.10414	330	100.58420	430	131.06426	530	161.54432	630	192.02438	730	222.50445	830	252.98451	930	283.46457
1	9.44882	1	39.92888	1	70.40894	1	100.88900	1	131.36906	1	161.84912	1	192.32918	1	222.80925	1	253.28931	1	283.76937
2	9.75362	2	40.23368	2	70.71374	2	101.19380	2	131.67386	2	162.15392	2	192.63399	2	223.11405	2	253.59411	2	284.07417
3	10.05842	3	40.53848	3	71.01854	3	101.49860	3	131.97866	3	162.45872	3	192.93879	3	223.41885	3	253.89891	3	284.37897
4	10.36322	4	40.84328	4	71.32334	4	101.80340	4	132.28346	4	162.76353	4	193.24359	4	223.72365	4	254.20371	4	284.68377
5	10.66802	5	41.14808	5	71.62814	5	102.10820	5	132.58827	5	163.06833	5	193.54839	5	224.02845	5	254.50851	5	284.98857
6	10.97282	6	41.45288	6	71.93294	6	102.41300	6	132.89307	6	163.37313	6	193.85319	6	224.33325	6	254.81331	6	285.29337
7	11.27762	7	41.75768	7	72.23774	7	102.71781	7	133.19787	7	163.67793	7	194.15799	7	224.63805	7	255.11811	7	285.59817
8	11.58242	8	42.06248	8	72.54255	8	103.02261	8	133.50267	8	163.98273	8	194.46279	8	224.94285	8	255.42291	8	285.90297
9	11.88722	9	42.36728	9	72.84735	9	103.32741	9	133.80747	9	164.28753	9	194.76759	9	225.24765	9	255.72771	9	286.20777
40	12.19202	140	42.67209	240	73.15215	340	103.63221	440	134.11227	540	164.59233	640	195.07239	740	225.55245	840	256.03251	940	286.51257
1	12.49682	1	42.97689	1	73.45695	1	103.93701	1	134.41707	1	164.89713	1	195.37719	1	225.85725	1	256.33731	1	286.81737
2	12.80163	2	43.28169	2	73.76175	2	104.24181	2	134.72187	2	165.20193	2	195.68199	2	226.16205	2	256.64211	2	287.12217
3	13.10643	3	43.58649	3	74.06655	3	104.54661	3	135.02667	3	165.50673	3	195.98679	3	226.46685	3	256.94691	3	287.42697
4	13.41123	4	43.89129	4	74.37135	4	104.85141	4	135.33147	4	165.81153	4	196.29159	4	226.77165	4	257.25171	4	287.73178
5	13.71603	5	44.19609	5	74.67615	5	105.15621	5	135.63627	5	166.11633	5	196.59639	5	227.07645	5	257.55652	5	288.03658
6	14.02083	6	44.50089	6	74.98095	6	105.46101	6	135.94107	6	166.42113	6	196.90119	6	227.38125	6	257.86132	6	288.34138
7	14.32563	7	44.80569	7	75.28575	7	105.76581	7	136.24587	7	166.72593	7	197.20599	7	227.68606	7	258.16612	7	288.64618
8	14.63043	8	45.11049	8	75.59055	8	106.07061	8	136.55067	8	167.03073	8	197.51080	8	227.99086	8	258.47092	8	288.95098
9	14.93523	9	45.41529	9	75.89535	9	106.37541	9	136.85547	9	167.33553	9	197.81560	9	228.29566	9	258.77572	9	289.25578

50	15.24003	**150**	45.72009	**250**	76.20015	**350**	106.68021	**450**	137.16027	**550**	167.64034	**650**	198.12040	**750**	228.60046	**850**	259.08052	**950**	289.56058
1	15.54483	1	46.02489	1	76.50495	1	106.98501	1	137.46507	1	167.94514	1	198.42520	1	228.90526	1	259.38532	1	289.86538
2	15.84963	2	46.32969	2	76.80975	2	107.28981	2	137.76988	2	168.24994	2	198.73000	2	229.21006	2	259.69012	2	290.17018
3	16.15443	3	46.63449	3	77.11455	3	107.59462	3	138.07468	3	168.55474	3	199.03480	3	229.51486	3	259.99492	3	290.47498
4	16.45923	4	46.93929	4	77.41935	4	107.89942	4	138.37948	4	168.85954	4	199.33960	4	229.81966	4	260.29972	4	290.77978
5	16.76403	5	47.24409	5	77.72416	5	108.20422	5	138.68428	5	169.16434	5	199.64440	5	230.12446	5	260.60452	5	291.08458
6	17.06883	6	47.54890	6	78.02896	6	108.50902	6	138.98908	6	169.46914	6	199.94920	6	230.42926	6	260.90932	6	291.38938
7	17.37363	7	47.85370	7	78.33376	7	108.81382	7	139.29388	7	169.77394	7	200.25400	7	230.73406	7	261.21412	7	291.69418
8	17.67844	8	48.15850	8	78.63856	8	109.11862	8	139.59868	8	170.07874	8	200.55880	8	231.03886	8	261.51892	8	291.99898
9	17.98324	9	48.46330	9	78.94336	9	109.42342	9	139.90348	9	170.38354	9	200.86360	9	231.34366	9	261.82372	9	292.30378
60	18.28804	**160**	48.76810	**260**	79.24816	**360**	109.72822	**460**	140.20828	**560**	170.68834	**660**	201.16840	**760**	231.64846	**860**	262.12852	**960**	292.60859
1	18.59284	1	49.07290	1	79.55296	1	110.03302	1	140.51308	1	170.99314	1	201.47320	1	231.95326	1	262.43332	1	292.91339
2	18.89764	2	49.37770	2	79.85776	2	110.33782	2	140.81788	2	171.29794	2	201.77800	2	232.25806	2	262.73813	2	293.21819
3	19.20244	3	49.68250	3	80.16256	3	110.64262	3	141.12268	3	171.60274	3	202.08280	3	232.56287	3	263.04293	3	293.52299
4	19.50724	4	49.98730	4	80.46736	4	110.94742	4	141.42748	4	171.90754	4	202.38760	4	232.86767	4	263.34773	4	293.82779
5	19.81204	5	50.29210	5	80.77216	5	111.25222	5	141.73228	5	172.21234	5	202.69241	5	233.17247	5	263.65253	5	294.13259
6	20.11684	6	50.59690	6	81.07696	6	111.55702	6	142.03708	6	172.51715	6	202.99721	6	233.47727	6	263.95733	6	294.43739
7	20.42164	7	50.90170	7	81.38176	7	111.86182	7	142.34188	7	172.82195	7	203.30201	7	233.78207	7	264.26213	7	294.74219
8	20.72644	8	51.20650	8	81.68656	8	112.16662	8	142.64669	8	173.12675	8	203.60681	8	234.08687	8	264.56693	8	295.04699
9	21.03124	9	51.51130	9	81.99136	9	112.47142	9	142.95149	9	173.43155	9	203.91161	9	234.39167	9	264.87173	9	295.35179
70	21.33604	**170**	51.81610	**270**	82.29616	**370**	112.77623	**470**	143.25629	**570**	173.73635	**670**	204.21641	**770**	234.69647	**870**	265.17653	**970**	295.65659
1	21.64084	1	52.12090	1	82.60097	1	113.08103	1	143.56109	1	174.04115	1	204.52121	1	235.00127	1	265.48133	1	295.96139
2	21.94564	2	52.42570	2	82.90577	2	113.38583	2	143.86589	2	174.34595	2	204.82601	2	235.30607	2	265.78613	2	296.26619
3	22.25044	3	52.73051	3	83.21057	3	113.69063	3	144.17069	3	174.65075	3	205.13081	3	235.61087	3	266.09093	3	296.57099
4	22.55525	4	53.03531	4	83.51537	4	113.99543	4	144.47549	4	174.95555	4	205.43561	4	235.91567	4	266.39573	4	296.87579
5	22.86005	5	53.34011	5	83.82017	5	114.30023	5	144.78029	5	175.26035	5	205.74041	5	236.22047	5	266.70053	5	297.18059
6	23.16485	6	53.64491	6	84.12497	6	114.60503	6	145.08509	6	175.56515	6	206.04521	6	236.52527	6	267.00533	6	297.48539
7	23.46965	7	53.94971	7	84.42977	7	114.90983	7	145.38989	7	175.86995	7	206.35001	7	236.83007	7	267.31013	7	297.79020
8	23.77445	8	54.25451	8	84.73457	8	115.21463	8	145.69469	8	176.17475	8	206.65481	8	237.13487	8	267.61494	8	298.09500
9	24.07925	9	54.55931	9	85.03937	9	115.51943	9	145.99949	9	176.47955	9	206.95961	9	237.43967	9	267.91974	9	298.39980
80	24.38405	**180**	54.86411	**280**	85.34417	**380**	115.82423	**480**	146.30429	**580**	176.78435	**680**	207.26441	**780**	237.74448	**880**	268.22454	**980**	298.70460
1	24.68885	1	55.16891	1	85.64897	1	116.12903	1	146.60909	1	177.08915	1	207.56922	1	238.04928	1	268.52934	1	299.00940
2	24.99365	2	55.47371	2	85.95377	2	116.43383	2	146.91389	2	177.39395	2	207.87402	2	238.35408	2	268.83414	2	299.31420
3	25.29845	3	55.77851	3	86.25857	3	116.73863	3	147.21869	3	177.69876	3	208.17882	3	238.65888	3	269.13894	3	299.61900
4	25.60325	4	56.08331	4	86.56337	4	117.04343	4	147.52350	4	178.00356	4	208.48362	4	238.96368	4	269.44374	4	299.92380
5	25.90805	5	56.38811	5	86.86817	5	117.34823	5	147.82830	5	178.30836	5	208.78842	5	239.26848	5	269.74854	5	300.22860
6	26.21285	6	56.69291	6	87.17297	6	117.65304	6	148.13310	6	178.61316	6	209.09322	6	239.57328	6	270.05334	6	300.53340
7	26.51765	7	56.99771	7	87.47777	7	117.95784	7	148.43790	7	178.91796	7	209.39802	7	239.87808	7	270.35814	7	300.83820
8	26.82245	8	57.30251	8	87.78258	8	118.26264	8	148.74270	8	179.22276	8	209.70282	8	240.18288	8	270.66294	8	301.14300
9	27.12725	9	57.60732	9	88.08738	9	118.56744	9	149.04750	9	179.52756	9	210.00762	9	240.48768	9	270.96774	9	301.44780
90	27.43205	**190**	57.91212	**290**	88.39218	**390**	118.87224	**490**	149.35230	**590**	179.83236	**690**	210.31242	**790**	240.79248	**890**	271.27254	**990**	301.75260
1	27.73686	1	58.21692	1	88.69698	1	119.17704	1	149.65710	1	180.13716	1	210.61722	1	241.09728	1	271.57734	1	302.05740
2	28.04166	2	58.52172	2	89.00178	2	119.48184	2	149.96190	2	180.44196	2	210.92202	2	241.40208	2	271.88214	2	302.36220
3	28.34646	3	58.82652	3	89.30658	3	119.78664	3	150.26670	3	180.74676	3	211.22682	3	241.70688	3	272.18694	3	302.66701
4	28.65126	4	59.13132	4	89.61138	4	120.09144	4	150.57150	4	181.05156	4	211.53162	4	242.01168	4	272.49174	4	302.97181
5	28.95606	5	59.43612	5	89.91618	5	120.39624	5	150.87630	5	181.35636	5	211.83642	5	242.31648	5	272.79655	5	303.27661
6	29.26086	6	59.74092	6	90.22098	6	120.70104	6	151.18110	6	181.66116	6	212.14122	6	242.62129	6	273.10135	6	303.58141
7	29.56566	7	60.04572	7	90.52578	7	121.00584	7	151.48590	7	181.96596	7	212.44602	7	242.92609	7	273.40615	7	303.88621
8	29.87046	8	60.35052	8	90.83058	8	121.31064	8	151.79070	8	182.27076	8	212.75083	8	243.23089	8	273.71095	8	304.19101
9	30.17526	9	60.65532	9	91.13538	9	121.61544	9	152.09550	9	182.57557	9	213.05563	9	243.53569	9	274.01575	9	304.49581

1 inch = 0.02540 meter	4 inches = 0.10160 meter	7 inches = 0.17780 meter	10 inches = 0.25400 meter
2 inches = .05080 meter	5 inches = .12700 meter	8 inches = .20320 meter	11 inches = .27940 meter
3 inches = .07620 meter	6 inches = .15240 meter	9 inches = .22860 meter	12 inches = .30480 meter

22698°—36——5

LENGTH—METERS TO FEET

[Reduction factor: 1 meter = 3.280833333 feet]

Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
0		100	328.08333	200	656.16667	300	984.25000	400	1,312.33333	500	1,640.41667	600	1,968.50000	700	2,296.58333	800	2,624.66667	900	2,952.75000
1	3.28083	1	331.36417	1	659.44750	1	987.53083	1	1,315.61417	1	1,643.69750	1	1,971.78083	1	2,299.86417	1	2,627.94750	1	2,956.03083
2	6.56167	2	334.64500	2	662.72833	2	990.81167	2	1,318.89500	2	1,646.97833	2	1,975.06167	2	2,303.14500	2	2,631.22833	2	2,959.31167
3	9.84250	3	337.92583	3	666.00917	3	994.09250	3	1,322.17583	3	1,650.25917	3	1,978.34250	3	2,306.42583	3	2,634.50917	3	2,962.59250
4	13.12333	4	341.20667	4	669.29000	4	997.37333	4	1,325.45667	4	1,653.54000	4	1,981.62333	4	2,309.70667	4	2,637.79000	4	2,965.87333
5	16.40417	5	344 48750	5	672.57083	5	1,000.65417	5	1,328.73750	5	1,656.82083	5	1,984.90417	5	2,312.98750	5	2,641.07083	5	2,969.15417
6	19.68500	6	347.76833	6	675.85167	6	1,003.93500	6	1,332.01833	6	1,660.10167	6	1,988.18500	6	2,316.26833	6	2,644.35167	6	2,972.43500
7	22.96583	7	351.04917	7	679.13250	7	1,007.21583	7	1,335.29917	7	1,663.38250	7	1,991.46583	7	2,319.54917	7	2,647.63250	7	2,975.71583
8	26.24667	8	354.33000	8	682.41333	8	1,010.49667	8	1,338.58000	8	1,666.66333	8	1,994.74667	8	2,322.83000	8	2,650.91333	8	2,978.99667
9	29.52750	9	357.61083	9	685.69417	9	1,013.77750	9	1,341.86083	9	1,669.94417	9	1,998.02750	9	2,326.11083	9	2,654.19417	9	2,982.27750
10	32.80833	110	360.89167	210	688.97500	310	1,017.05833	410	1,345.14167	510	1,673.22500	610	2,001.30833	710	2,329.39167	810	2,657.47500	910	2,985.55833
1	36.08917	1	364.17250	1	692.25583	1	1,020 33917	1	1,348.42250	1	1,676.50583	1	2,004.58917	1	2,332.67250	1	2,660.75583	1	2,988.83917
2	39.37000	2	367.45333	2	695.53667	2	1,023.62000	2	1,351.70333	2	1,679.78667	2	2,007.87000	2	2,335.95333	2	2,664.03667	2	2,992.12000
3	42.65083	3	370.73417	3	698.81750	3	1,026.90083	3	1,354.98417	3	1,683.06750	3	2,011.15083	3	2,339.23417	3	2,667.31750	3	2,995.40083
4	45.93167	4	374.01500	4	702.09833	4	1,030.18167	4	1,358.26500	4	1,686.34833	4	2,014.43167	4	2,342.51500	4	2,670.59833	4	2,998.68167
5	49.21250	5	377.29583	5	705.37917	5	1,033.46250	5	1,361.54583	5	1,689.62917	5	2,017.71250	5	2,345.79583	5	2,673.87917	5	3,001.96250
6	52.49333	6	380.57667	6	708.66000	6	1,036.74333	6	1,364.82667	6	1,692.91000	6	2,020.99333	6	2,349.07667	6	2,677.16000	6	3,005.24333
7	55.77417	7	383.85750	7	711.94083	7	1,040.02417	7	1,368.10750	7	1,696.19083	7	2,024.27417	7	2,352.35750	7	2,680.44083	7	3,008.52417
8	59.05500	8	387.13833	8	715.22167	8	1,043.30500	8	1,371.38833	8	1,699.47167	8	2,027.55500	8	2,355.63833	8	2,683.72167	8	3,011.80500
9	62.33583	9	390.41917	9	718.50250	9	1,046.58583	9	1,374.66917	9	1,702.75250	9	2,030.83583	9	2,358.91917	9	2,687.00250	9	3,015.08583
20	65.61667	120	393.70000	220	721.78333	320	1,049.86667	420	1,377.95000	520	1,706.03333	620	2,034.11667	720	2,362.20000	820	2,690.28333	920	3,018.36667
1	68.89750	1	396.98083	1	725.06417	1	1,053.14750	1	1,381.23083	1	1,709.31417	1	2,037.39750	1	2,365.48083	1	2,693.56417	1	3,021.64750
2	72.17833	2	400.26167	2	728.34500	2	1,056.42833	2	1,384.51167	2	1,712.59500	2	2,040.67833	2	2,368.76167	2	2,696.84500	2	3,024.92833
3	75.45917	3	403.54250	3	731.62583	3	1,059.70917	3	1,387.79250	3	1,715.87583	3	2,043.95917	3	2,372.04250	3	2,700.12583	3	3,028.20917
4	78.74000	4	406.82333	4	734.90667	4	1,062.99000	4	1,391.07333	4	1,719.15667	4	2,047.24000	4	2,375.32333	4	2,703.40667	4	3,031.49000
5	82.02083	5	410.10417	5	738.18750	5	1,066.27083	5	1,394.35417	5	1,722.43750	5	2,050.52083	5	2,378.60417	5	2,706.68750	5	3,034.77083
6	85.30167	6	413.38500	6	741.46833	6	1,069.55167	6	1,397.63500	6	1,725.71833	6	2,053.80167	6	2,381.88500	6	2,709.96833	6	3,038.05167
7	88.58250	7	416.66583	7	744.74917	7	1,072.83250	7	1,400.91583	7	1,728.99917	7	2,057.08250	7	2,385.16583	7	2,713.24917	7	3,041.33250
8	91.86333	8	419.94667	8	748.03000	8	1,076.11333	8	1,404.19667	8	1,732.28000	8	2,060.36333	8	2,388.44667	8	2,716.53000	8	3,044.61333
9	95.14417	9	423.22750	9	751.31083	9	1,079.39417	9	1,407.47750	9	1,735.56083	9	2,063.64417	9	2,391.72750	9	2,719.81083	9	3,047.89417
30	98.42500	130	426.50833	230	754.59167	330	1,082.67500	430	1,410,75833	530	1,738.84167	630	2,066.92500	730	2,395.00833	830	2,723.09167	930	3,051.17500
1	101.70583	1	429.78917	1	757.87250	1	1,085.95583	1	1,414.03917	1	1,742.12250	1	2,070.20583	1	2,398.28917	1	2,726.37250	1	3,054.45583
2	104.98667	2	433.07000	2	761.15333	2	1,089.23667	2	1,417.32000	2	1,745.40333	2	2,073.48667	2	2,401.57000	2	2,729.65333	2	3,057.73667
3	108.26750	3	436.35083	3	764.43417	3	1,092.51750	3	1,420.60083	3	1,748.68417	3	2,076.76750	3	2,404.85083	3	2,732.93417	3	3,061.01750
4	111.54833	4	439.63167	4	767.71500	4	1,095.79833	4	1,423.88167	4	1,751.96500	4	2,080.04833	4	2,408.13167	4	2,736.21500	4	3,064.29833
5	114.82917	5	442.91250	5	770.99583	5	1,099.07917	5	1,427.16250	5	1,755.24583	5	2,083.32917	5	2,411.41250	5	2,739.49583	5	3,067.57917
6	118.11000	6	446.19333	6	774.27667	6	1,102.36000	6	1,430.44333	6	1,758.52667	6	2,086.61000	6	2,414.69333	6	2,742.77667	6	3,070.86000
7	121.39083	7	449.47417	7	777.55750	7	1,105.64083	7	1,433.72417	7	1,761.80750	7	2,089.89083	7	2,417.97417	7	2,746.05750	7	3,074.14083
8	124.67167	8	452.75500	8	780.83833	8	1,108.92167	8	1,437.00500	8	1,765.08833	8	2,093.17167	8	2,421.25500	8	2,749.33833	8	3,077.42167
9	127.95250	9	456.03583	9	784.11917	9	1,112.20250	9	1,440.28583	9	1,768.36917	9	2,096.45250	9	2,424.53583	9	2,752.61917	9	3,080.70250
40	131.23333	140	459.31667	240	787.40000	340	1,115.48333	440	1,443.56667	540	1,771.65000	640	2,099.73333	740	2,427.81667	840	2,755.90000	940	3,083.98333
1	134.51417	1	462.59750	1	790.68083	1	1,118.76417	1	1,446.84750	1	1,774.93083	1	2,103.01417	1	2,431.09750	1	2,759.18083	1	3,087.26417
2	137.79500	2	465.87833	2	793.96167	2	1,122.04500	2	1,450.12833	2	1,778.21167	2	2,106.29500	2	2,434.37833	2	2,762.46167	2	3,090.54500
3	141.07583	3	469.15917	3	797.24250	3	1,125.32583	3	1,453.40917	3	1,781.49250	3	2,109.57583	3	2,437.65917	3	2,765.74250	3	3,093.82583
4	144.35667	4	472.44000	4	800.52333	4	1,128.60667	4	1,456.69000	4	1,784.77333	4	2,112.85667	4	2,440.94000	4	2,769.02333	4	3,097.10667
5	147.63750	5	475.72083	5	803.80417	5	1,131.88750	5	1,459.97083	5	1,788.05417	5	2,116.13750	5	2,444.22083	5	2,772.30417	5	3,100.38750
6	150.91833	6	479.00167	6	807.08500	6	1,135.16833	6	1,463.25167	6	1,791.33500	6	2,119.41833	6	2,447.50167	6	2,775.58500	6	3,103.66833
7	154.19917	7	482.28250	7	810.36583	7	1,138.44917	7	1,466.53250	7	1,794.61583	7	2,122.69917	7	2,450.78250	7	2,778.86583	7	3,106.94917
8	157.48000	8	485.56333	8	813.64667	8	1,141.73000	8	1,469.81333	8	1,797.89667	8	2,125.98000	8	2,454.06333	8	2,782.14667	8	3,110.23000
9	160.76083	9	488.84417	9	816.92750	9	1,145.01083	9	1,473.09417	9	1,801.17750	9	2,129.26083	9	2,457.34417	9	2,785.42750	9	3,113.51083

50	164.04167	**150**	492.12500	**250**	820.20833	**350**	1,148.29167	**450**	1,476.37500	**550**	1,804.45833	**650**	2,132.54167	**750**	2,460.62500	**850**	2,788.70833	**950**	3,116.79167
1	167.32250	1	495.40583	1	823.48917	1	1,151.57250	1	1,479.65583	1	1,807.73917	1	2,135.82250	1	2,463.90583	1	2,791.98917	1	3,120.07250
2	170.60333	2	498.68667	2	826.77000	2	1,154.85333	2	1,482.93667	2	1,811.02000	2	2,139.10333	2	2,467.18667	2	2,795.27000	2	3,123.35333
3	173.88417	3	501.96750	3	830.05083	3	1,158.13417	3	1,486.21750	3	1,814.30083	3	2,142.38417	3	2,470.46750	3	2,798.55083	3	3,126.63417
4	177.16500	4	505.24833	4	833.33167	4	1,161.41500	4	1,489.49833	4	1,817.58167	4	2,145.66500	4	2,473.74833	4	2,801.83167	4	3,129.91500
5	180.44583	5	508.52917	5	836.61250	5	1,164.69583	5	1,492.77917	5	1,820.86250	5	2,148.94583	5	2,477.02917	5	2,805.11250	5	3,133.19583
6	183.72667	6	511.81000	6	839.89333	6	1,167.97667	6	1,496.06000	6	1,824.14333	6	2,152.22667	6	2,480.31000	6	2,808.39333	6	3,136.47667
7	187.00750	7	515.09083	7	843.17417	7	1,171.25750	7	1,499.34083	7	1,827.42417	7	2,155.50750	7	2,483.59083	7	2,811.67417	7	3,139.75750
8	190.28833	8	518.37167	8	846.45500	8	1,174.53833	8	1,502.62167	8	1,830.70500	8	2,158.78833	8	2,486.87167	8	2,814.95500	8	3,143.03833
9	193.56917	9	521.65250	9	849.73583	9	1,177.81917	9	1,505.90250	9	1,833.98583	9	2,162.06917	9	2,490.15250	9	2,818.23583	9	3,146.31917
60	196.85000	**4160**	524.93333	**260**	853.01667	**360**	1,181.10000	**460**	1,509.18333	**560**	1,837.26667	**660**	2,165.35000	**760**	2,493 43333	**860**	2,821.51667	**960**	3,149.60000
1	200.13083	1	528.21417	1	856.29750	1	1,184.38083	1	1,512.46417	1	1,840.54750	1	2,168.63083	1	2,496.71417	1	2,824.79750	1	3,152.88083
2	203.41167	2	531.49500	2	859.57833	2	1,187.66167	2	1,515.74500	2	1,843.82833	2	2,171.91167	2	2,499.99500	2	2,828.07833	2	3,156.16167
3	206.69250	3	534.77583	3	862.85917	3	1,190.94250	3	1,519.02583	3	1,847.10917	3	2,175.19250	3	2,503.27583	3	2,831.35917	3	3,159.44250
4	209.97333	4	538.05667	4	866.14000	4	1,194.22333	4	1,522.30667	4	1,850.39000	4	2,178.47333	4	2,506.55667	4	2,834.64000	4	3,162.72333
5	213.25417	5	541.33750	5	869.42083	5	1,197.50417	5	1,525.58750	5	1,853.67083	5	2,181.75417	5	2,509.83750	5	2,837.92083	5	3,166.00417
6	216.53500	6	544.61833	6	872.70167	6	1,200.78500	6	1,528.86833	6	1,856.95167	6	2,185.03500	6	2,513.11833	6	2,841.20167	6	3,169.28500
7	219.81583	7	547.89917	7	875.98250	7	1,204.06583	7	1,532.14917	7	1,860.23250	7	2,188.31583	7	2,516.39917	7	2,844.48250	7	3,172.56583
8	223.09667	8	551.18000	8	879.26333	8	1,207.34667	8	1,535.43000	8	1,863.51333	8	2,191.59667	8	2,519.68000	8	2,847.76333	8	3,175.84667
9	226.37750	9	554.46083	9	882.54417	9	1,210.62750	9	1,538.71083	9	1,866.79417	9	2,194.87750	9	2,522.96083	9	2,851.04417	9	3,179.12750
70	229.65833	**170**	557.74167	**270**	885.82500	**370**	1,213.90833	**470**	1,541.99167	**570**	1,870.07500	**670**	2,198.15833	**770**	2,526.24167	**870**	2,854.32500	**970**	3,182.40833
1	232.93917	1	561.02250	1	889.10583	1	1,217.18917	1	1,545.27250	1	1,873.35583	1	2,201.43917	1	2,529.52250	1	2,857.60583	1	3,185.68917
2	236.22000	2	564.30333	2	892.38667	2	1,220.47000	2	1,548.55333	2	1,876.63667	2	2,204.72000	2	2,532.80333	2	2,860.88667	2	3,188.97000
3	239.50083	3	567.58417	3	895.66750	3	1,223.75083	3	1,551.83417	3	1,879.91750	3	2,208.00083	3	2,536.08417	3	2,864.16750	3	3,192.25083
4	242.78167	4	570.86500	4	898.94833	4	1,227.03167	4	1,555.11500	4	1,883.19833	4	2,211.28167	4	2,539.36500	4	2,867.44833	4	3,195.53167
5	246.06250	5	574.14583	5	902.22917	5	1,230.31250	5	1,558.39583	5	1,886.47917	5	2,214.56250	5	2,542.64583	5	2,870.72917	5	3,198.81250
6	249.34333	6	577.42667	6	905.51000	6	1,233.59333	6	1,561.67667	6	1,889.76000	6	2,217.84333	6	2,545.92667	6	2,874.01000	6	3,202.09333
7	252.62417	7	580.70750	7	908.79083	7	1,236.87417	7	1,564.95750	7	1,893.04083	7	2,221.12417	7	2,549.20750	7	2,877.29083	7	3,205.37417
8	255.90500	8	583.98833	8	912.07167	8	1,240.15500	8	1,568.23833	8	1,896.32167	8	2,224.40500	8	2,552.48833	8	2,880.57167	8	3,208.65500
9	259.18583	9	587.26917	9	915.35250	9	1,243.43583	9	1,571.51917	9	1,899.60250	9	2,227.68583	9	2,555.76917	9	2,883.85250	9	3,211.93583
80	262.46667	**180**	590.55000	**280**	918.63333	**380**	1,246.71667	**480**	1,574.80000	**580**	1,902.88333	**680**	2,230.96667	**780**	2,559.05000	**880**	2,887.13333	**980**	3,215.21667
1	265.74750	1	593.83083	1	921.91417	1	1,249.99750	1	1,578.08083	1	1,906.16417	1	2,234.24750	1	2,562.33083	1	2,890.41417	1	3,218.49750
2	269.02833	2	597.11167	2	925.19500	2	1,253.27833	2	1,581.36167	2	1,909.44500	2	2,237.52833	2	2,565.61167	2	2,893.69500	2	3,221.77833
3	272.30917	3	600.39250	3	928.47583	3	1,256.55917	3	1,584.64250	3	1,912.72583	3	2,240.80917	3	2,568.89250	3	2,896.97583	3	3,225.05917
4	275.59000	4	603.67333	4	931.75667	4	1,259.84000	4	1,587.92333	4	1,916.00667	4	2,244.09000	4	2,572.17333	4	2,900.25667	4	3,228.34000
5	278.87083	5	606.95417	5	935.03750	5	1,263.12083	5	1,591.20417	5	1,919.28750	5	2,247.37083	5	2,575.45417	5	2,903.53750	5	3,231.62083
6	282.15167	6	610.23500	6	938.31833	6	1,266.40167	6	1,594.48500	6	1,922.56833	6	2,250.65167	6	2,578.73500	6	2,906.81833	6	3,234.90167
7	285.43250	7	613.51583	7	941.59917	7	1,269.68250	7	1,597.76583	7	1,925.84917	7	2,253.93250	7	2,582.01583	7	2,910.09917	7	3,238.18250
8	288.71333	8	616.79667	8	944.88000	8	1,272.96333	8	1,601.04667	8	1,929.13000	8	2,257.21333	8	2,585.29667	8	2,913.38000	8	3,241.46333
9	291.99417	9	620.07750	9	948.16083	9	1,276.24417	9	1,604.32750	9	1,932.41083	9	2,260.49417	9	2,588.57750	9	2,916.66083	9	3,244.74417
90	295.27500	**190**	623.35833	**290**	951.44167	**390**	1,279.52500	**490**	1,607.60833	**590**	1,935.69167	**690**	2,263.77500	**790**	2,591.85833	**890**	2,919.94167	**990**	3,248.02500
1	298.55583	1	626.63917	1	954.72250	1	1,282.80583	1	1,610.88917	1	1,938.97250	1	2,267.05583	1	2,595.13917	1	2,923.22250	1	3,251.30583
2	301.83667	2	629.92000	2	958.00333	2	1,286.08667	2	1,614.17000	2	1,942.25333	2	2,270.33667	2	2,598.42000	2	2,926.50333	2	3,254.58667
3	305.11750	3	633.20083	3	961.28417	3	1,289.36750	3	1,617.45083	3	1,945.53417	3	2,273.61750	3	2,601.70083	3	2,929.78417	3	3,257.86750
4	308.39833	4	636.48167	4	964.56500	4	1,292.64833	4	1,620.73167	4	1,948.81500	4	2,276.89833	4	2,604.98167	4	2,933.06500	4	3,261.14833
5	311.67917	5	639.76250	5	967.84583	5	1,295.92917	5	1,624.01250	5	1,952.09583	5	2,280.17917	5	2,608.26250	5	2,936.34583	5	3,264.42917
6	314.96000	6	643.04333	6	971.12667	6	1,299.21000	6	1,627.29333	6	1,955.37667	6	2,283.46000	6	2,611.54333	6	2,939.62667	6	3,267.71000
7	318.24083	7	646.32417	7	974.40750	7	1,302.49083	7	1,630.57417	7	1,958.65750	7	2,286.74083	7	2,614.82417	7	2,942.90750	7	3,270.99083
8	321.52167	8	649.60500	8	977.68833	8	1,305.77167	8	1,633.85500	8	1,961.93833	8	2,290.02167	8	2,618.10500	8	2,946.18833	8	3,274.27167
9	324.80250	9	652.88583	9	980.96917	9	1,309.05250	9	1,637.13583	9	1,965.21917	9	2,293.30250	9	2,621.38583	9	2,949.46917	9	3,277.55250

LENGTH—MILES TO KILOMETERS

[Reduction factor: 1 mile=1.609347219 kilometers]

Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers
0		**100**	160.9347	**200**	321.8694	**300**	482.8042	**400**	643.7389	**500**	804.6736	**600**	965.6083	**700**	1,126.5431	**800**	1,287.4778	**900**	1,448.4125
1	1.6093	1	162.5441	1	323.4788	1	484.4135	1	645.3482	1	806.2830	1	967.2177	1	1,128.1524	1	1,289.0871	1	1,450.0218
2	3.2187	2	164.1534	2	325.0881	2	486.0229	2	646.9576	2	807.8923	2	968.8270	2	1,129.7617	2	1,290.6965	2	1,451.6312
3	4.8280	3	165.7628	3	326.6975	3	487.6322	3	648.5669	3	809.5017	3	970.4364	3	1,131.3711	3	1,292.3058	3	1,453.2405
4	6.4374	4	167.3721	4	328.3068	4	489.2416	4	650.1763	4	811.1110	4	972.0457	4	1,132.9804	4	1,293.9152	4	1,454.8499
5	8.0467	5	168.9815	5	329.9162	5	490.8509	5	651.7856	5	812.7203	5	973.6551	5	1,134.5898	5	1,295.5245	5	1,456.4592
6	9.6561	6	170.5908	6	331.5255	6	492.4602	6	653.3950	6	814.3297	6	975.2644	6	1,136.1991	6	1,297.1339	6	1,458.0686
7	11.2654	7	172.2002	7	333.1349	7	494.0696	7	655.0043	7	815.9390	7	976.8738	7	1,137.8085	7	1,298.7432	7	1,459.6779
8	12.8748	8	173.8095	8	334.7442	8	495.6789	8	656.6137	8	817.5484	8	978.4831	8	1,139.4178	8	1,300.3526	8	1,461.2873
9	14.4841	9	175.4188	9	336.3536	9	497.2883	9	658.2230	9	819.1577	9	980.0925	9	1,141.0272	9	1,301.9619	9	1,462.8966
10	16.0935	**110**	177.0282	**210**	337.9629	**310**	498.8976	**410**	659.8324	**510**	820.7671	**610**	981.7018	**710**	1,142.6365	**810**	1,303.5712	**910**	1,464.5060
1	17.7028	1	178.6375	1	339.5723	1	500.5070	1	661.4417	1	822.3764	1	983.3112	1	1,144.2459	1	1,305.1806	1	1,466.1153
2	19.3122	2	180.2469	2	341.1816	2	502.1163	2	663.0511	2	823.9858	2	984.9205	2	1,145.8552	2	1,306.7899	2	1,467.7247
3	20.9215	3	181.8562	3	342.7910	3	503.7257	3	664.6604	3	825.5951	3	986.5298	3	1,147.4646	3	1,308.3993	3	1,469.3340
4	22.5309	4	183.4656	4	344.4003	4	505.3350	4	666.2697	4	827.2045	4	988.1392	4	1,149.0739	4	1,310.0086	4	1,470.9434
5	24.1402	5	185.0749	5	346.0097	5	506.9444	5	667.8791	5	828.8138	5	989.7485	5	1,150.6833	5	1,311.6180	5	1,472.5527
6	25.7496	6	186.6843	6	347.6190	6	508.5537	6	669.4884	6	830.4232	6	991.3579	6	1,152.2926	6	1,313.2273	6	1,474.1621
7	27.3589	7	188.2936	7	349.2283	7	510.1631	7	671.0978	7	832.0325	7	992.9672	7	1,153.9020	7	1,314.8367	7	1,475.7714
8	28.9682	8	189.9030	8	350.8377	8	511.7724	8	672.7071	8	833.6419	8	994.5766	8	1,155.5113	8	1,316.4460	8	1,477.3807
9	30.5776	9	191.5123	9	352.4470	9	513.3818	9	674.3165	9	835.2512	9	996.1859	9	1,157.1207	9	1,318.0554	9	1,478.9901
20	32.1869	**120**	193.1217	**220**	354.0564	**320**	514.9911	**420**	675.9258	**520**	836.8606	**620**	997.7953	**720**	1,158.7300	**820**	1,319.6647	**920**	1,480.5994
1	33.7963	1	194.7310	1	355.6657	1	516.6005	1	677.5352	1	838.4699	1	999.4046	1	1,160.3393	1	1,321.2741	1	1,482.2088
2	35.4056	2	196.3404	2	357.2751	2	518.2098	2	679.1445	2	840.0792	2	1,001.0140	2	1,161.9487	2	1,322.8834	2	1,483.8181
3	37.0150	3	197.9497	3	358.8844	3	519.8192	3	680.7539	3	841.6886	3	1,002.6233	3	1,163.5580	3	1,324.4928	3	1,485.4275
4	38.6243	4	199.5591	4	360.4938	4	521.4285	4	682.3632	4	843.2979	4	1,004.2327	4	1,165.1674	4	1,326.1021	4	1,487.0368
5	40.2337	5	201.1684	5	362.1031	5	523.0378	5	683.9726	5	844.9073	5	1,005.8420	5	1,166.7767	5	1,327.7115	5	1,488.6462
6	41.8430	6	202.7777	6	363.7125	6	524.6472	6	685.5819	6	846.5166	6	1,007.4514	6	1,168.3861	6	1,329.3208	6	1,490.2555
7	43.4524	7	204.3871	7	365.3218	7	526.2565	7	687.1913	7	848.1260	7	1,009.0607	7	1,169.9954	7	1,330.9301	7	1,491.8649
8	45.0617	8	205.9964	8	366.9312	8	527.8659	8	688.8006	8	849.7353	8	1,010.6701	8	1,171.6048	8	1,332.5395	8	1,493.4742
9	46.6711	9	207.6058	9	368.5405	9	529.4752	9	690.4100	9	851.3447	9	1,012.2794	9	1,173.2141	9	1,334.1488	9	1,495.0836
30	48.2804	**130**	209.2151	**230**	370.1499	**330**	531.0846	**430**	692.0193	**530**	852.9540	**630**	1,013.8887	**730**	1,174.8235	**830**	1,335.7582	**930**	1,496.6929
1	49.8898	1	210.8245	1	371.7592	1	532.6939	1	693.6287	1	854.5634	1	1,015.4981	1	1,176.4328	1	1,337.3675	1	1,498.3023
2	51.4991	2	212.4338	2	373.3686	2	534.3033	2	695.2380	2	856.1727	2	1,017.1074	2	1,178.0422	2	1,338.9769	2	1,499.9116
3	53.1085	3	214.0432	3	374.9779	3	535.9126	3	696.8473	3	857.7821	3	1,018.7168	3	1,179.6515	3	1,340.5862	3	1,501.5210
4	54.7178	4	215.6525	4	376.5872	4	537.5220	4	698.4567	4	859.3914	4	1,020.3261	4	1,181.2609	4	1,342.1956	4	1,503.1303
5	56.3272	5	217.2619	5	378.1966	5	539.1313	5	700.0660	5	861.0008	5	1,021.9355	5	1,182.8702	5	1,343.8049	5	1,504.7396
6	57.9365	6	218.8712	6	379.8059	6	540.7407	6	701.6754	6	862.6101	6	1,023.5448	6	1,184.4796	6	1,345.4143	6	1,506.3490
7	59.5458	7	220.4806	7	381.4153	7	542.3500	7	703.2847	7	864.2195	7	1,025.1542	7	1,186.0889	7	1,347.0236	7	1,507.9583
8	61.1552	8	222.0899	8	383.0246	8	543.9594	8	704.8941	8	865.8288	8	1,026.7635	8	1,187.6982	8	1,348.6330	8	1,509.5677
9	62.7645	9	223.6993	9	384.6340	9	545.5687	9	706.5034	9	867.4382	9	1,028.3729	9	1,189.3076	9	1,350.2423	9	1,511.1770
40	64.3739	**140**	225.3086	**240**	386.2433	**340**	547.1781	**440**	708.1128	**540**	869.0475	**640**	1,029.9822	**740**	1,190.9169	**840**	1,351.8517	**940**	1,512.7864
1	65.9832	1	226.9180	1	387.8527	1	548.7874	1	709.7221	1	870.6568	1	1,031.5916	1	1,192.5263	1	1,353.4610	1	1,514.3957
2	67.5926	2	228.5273	2	389.4620	2	550.3967	2	711.3315	2	872.2662	2	1,033.2009	2	1,194.1356	2	1,355.0704	2	1,516.0051
3	69.2019	3	230.1366	3	391.0714	3	552.0061	3	712.9408	3	873.8755	3	1,034.8103	3	1,195.7450	3	1,356.6797	3	1,517.6144
4	70.8113	4	231.7460	4	392.6807	4	553.6154	4	714.5502	4	875.4849	4	1,036.4196	4	1,197.3543	4	1,358.2891	4	1,519.2238
5	72.4206	5	233.3553	5	394.2901	5	555.2248	5	716.1595	5	877.0942	5	1,038.0290	5	1,198.9637	5	1,359.8984	5	1,520.8331
6	74.0300	6	234.9647	6	395.8994	6	556.8341	6	717.7689	6	878.7036	6	1,039.6383	6	1,200.5730	6	1,361.5077	6	1,522.4425
7	75.6393	7	236.5740	7	397.5088	7	558.4435	7	719.3782	7	880.3129	7	1,041.2477	7	1,202.1824	7	1,363.1171	7	1,524.0518
8	77.2487	8	238.1834	8	399.1181	8	560.0528	8	720.9876	8	881.9223	8	1,042.8570	8	1,203.7917	8	1,364.7264	8	1,525.6612
9	78.8580	9	239.7927	9	400.7275	9	561.6622	9	722.5969	9	883.5316	9	1,044.4663	9	1,205.4011	9	1,366.3358	9	1,527.2705

50	80.4674	**150**	241.4021	**250**	402.3368	**350**	563.2715	**450**	724.2062	**550**	885.1410	**650**	1,046.0757	**750**	1,207.0104	**850**	1,367.9451	**950**	1,528.8799
1	82.0767	1	243.0114	1	403.9461	1	564.8809	1	725.8156	1	886.7503	1	1,047.6850	1	1,208.6198	1	1,369.5545	1	1,530.4892
2	83.6861	2	244.6208	2	405.5555	2	566.4902	2	727.4249	2	888.3597	2	1,049.2944	2	1,210.2291	2	1,371.1638	2	1,532.0986
3	85.2954	3	246.2301	3	407.1648	3	568.0996	3	729.0343	3	889.9690	3	1,050.9037	3	1,211.8385	3	1,372.7732	3	1,533.7079
4	86.9047	4	247.8395	4	408.7742	4	569.7089	4	730.6436	4	891.5784	4	1,052.5131	4	1,213.4478	4	1,374.3825	4	1,535.3172
5	88.5141	5	249.4488	5	410.3835	5	571.3183	5	732.2530	5	893.1877	5	1,054.1224	5	1,215.0572	5	1,375.9919	5	1,536.9266
6	90.1234	6	251.0582	6	411.9929	6	572.9276	6	733.8623	6	894.7971	6	1,055.7318	6	1,216.6665	6	1,377.6012	6	1,538.5359
7	91.7328	7	252.6675	7	413.6022	7	574.5370	7	735.4717	7	896.4064	7	1,057.3411	7	1,218.2758	7	1,379.2106	7	1,540.1453
8	93.3421	8	254.2769	8	415.2116	8	576.1463	8	737.0810	8	898.0157	8	1,058.9505	8	1,219.8852	8	1,380.8199	8	1,541.7546
9	94.9515	9	255.8862	9	416.8209	9	577.7557	9	738.6904	9	899.6251	9	1,060.5598	9	1,221.4945	9	1,382.4293	9	1,543.3640
60	96.5608	**160**	257.4956	**260**	418.4303	**360**	579.3650	**460**	740.2997	**560**	901.2344	**660**	1,062.1692	**760**	1,223.1039	**860**	1,384.0386	**960**	1,544.9733
1	98.1702	1	259.1049	1	420.0396	1	580.9743	1	741.9091	1	902.8438	1	1,063.7785	1	1,224.7132	1	1,385.6480	1	1,546.5827
2	99.7795	2	260.7142	2	421.6490	2	582.5837	2	743.5184	2	904.4531	2	1,065.3879	2	1,226.3226	2	1,387.2573	2	1,548.1920
3	101.3889	3	262.3236	3	423.2583	3	584.1930	3	745.1278	3	906.0625	3	1,066.9972	3	1,227.9319	3	1,388.8666	3	1,549.8014
4	102.9982	4	263.9329	4	424.8677	4	585.8024	4	746.7371	4	907.6718	4	1,068.6066	4	1,229.5413	4	1,390.4760	4	1,551.4107
5	104.6076	5	265.5423	5	426.4770	5	587.4117	5	748.3465	5	909.2812	5	1,070.2159	5	1,231.1506	5	1,392.0853	5	1,553.0201
6	106.2169	6	267.1516	6	428.0864	6	589.0211	6	749.9558	6	910.8905	6	1,071.8252	6	1,232.7600	6	1,393.6947	6	1,554.6294
7	107.8263	7	268.7610	7	429.6957	7	590.6304	7	751.5652	7	912.4999	7	1,073.4346	7	1,234.3693	7	1,395.3040	7	1,556.2388
8	109.4356	8	270.3703	8	431.3051	8	592.2398	8	753.1745	8	914.1092	8	1,075.0439	8	1,235.9787	8	1,396.9134	8	1,557.8481
9	111.0450	9	271.9797	9	432.9144	9	593.8491	9	754.7838	9	915.7186	9	1,076.6533	9	1,237.5880	9	1,398.5227	9	1,559.4575
70	112.6543	**170**	273.5890	**270**	434.5237	**370**	595.4585	**470**	756.3932	**570**	917.3279	**670**	1,078.2626	**770**	1,239.1974	**870**	1,400.1321	**970**	1,561.0668
1	114.2637	1	275.1984	1	436.1331	1	597.0678	1	758.0025	1	918.9373	1	1,079.8720	1	1,240.8067	1	1,401.7414	1	1,562.6761
2	115.8730	2	276.8077	2	437.7424	2	598.6772	2	759.6119	2	920.5466	2	1,081.4813	2	1,242.4161	2	1,403.3508	2	1,564.2855
3	117.4823	3	278.4171	3	439.3518	3	600.2865	3	761.2212	3	922.1560	3	1,083.0907	3	1,244.0254	3	1,404.9601	3	1,565.8948
4	119.0917	4	280.0264	4	440.9611	4	601.8959	4	762.8306	4	923.7653	4	1,084.7000	4	1,245.6347	4	1,406.5695	4	1,567.5042
5	120.7010	5	281.6358	5	442.5705	5	603.5052	5	764.4399	5	925.3747	5	1,086.3094	5	1,247.2441	5	1,408.1788	5	1,569.1135
6	122.3104	6	283.2451	6	444.1798	6	605.1145	6	766.0493	6	926.9840	6	1,087.9187	6	1,248.8534	6	1,409.7882	6	1,570.7229
7	123.9197	7	284.8545	7	445.7892	7	606.7239	7	767.6586	7	928.5933	7	1,089.5281	7	1,250.4628	7	1,411.3975	7	1,572.3322
8	125.5291	8	286.4638	8	447.3985	8	608.3332	8	769.2680	8	930.2027	8	1,091.1374	8	1,252.0721	8	1,413.0069	8	1,573.9416
9	127.1384	9	288.0732	9	449.0079	9	609.9426	9	770.8773	9	931.8120	9	1,092.7468	9	1,253.6815	9	1,414.6162	9	1,575.5509
80	128.7478	**180**	289.6825	**280**	450.6172	**380**	611.5519	**480**	772.4867	**580**	933.4214	**680**	1,094.3561	**780**	1,255.2908	**880**	1,416.2256	**980**	1,577.1603
1	130.3571	1	291.2918	1	452.2266	1	613.1613	1	774.0960	1	935.0307	1	1,095.9655	1	1,256.9002	1	1,417.8349	1	1,578.7696
2	131.9665	2	292.9012	2	453.8359	2	614.7706	2	775.7054	2	936.6401	2	1,097.5748	2	1,258.5095	2	1,419.4442	2	1,580.3790
3	133.5758	3	294.5105	3	455.4453	3	616.3800	3	777.3147	3	938.2494	3	1,099.1842	3	1,260.1189	3	1,421.0536	3	1,581.9883
4	135.1852	4	296.1199	4	457.0546	4	617.9893	4	778.9241	4	939.8588	4	1,100.7935	4	1,261.7282	4	1,422.6629	4	1,583.5977
5	136.7945	5	297.7292	5	458.6640	5	619.5987	5	780.5334	5	941.4681	5	1,102.4028	5	1,263.3376	5	1,424.2723	5	1,585.2070
6	138.4039	6	299.3386	6	460.2733	6	621.2080	6	782.1427	6	943.0775	6	1,104.0122	6	1,264.9469	6	1,425.8816	6	1,586.8164
7	140.0132	7	300.9479	7	461.8827	7	622.8174	7	783.7521	7	944.6868	7	1,105.6215	7	1,266.5563	7	1,427.4910	7	1,588.4257
8	141.6226	8	302.5573	8	463.4920	8	624.4267	8	785.3614	8	946.2962	8	1,107.2309	8	1,268.1656	8	1,429.1003	8	1,590.0351
9	143.2319	9	304.1666	9	465.1013	9	626.0361	9	786.9708	9	947.9055	9	1,108.8402	9	1,269.7750	9	1,430.7097	9	1,591.6444
90	144.8412	**190**	305.7760	**290**	466.7107	**390**	627.6454	**490**	788.5801	**590**	949.5149	**690**	1,110.4496	**790**	1,271.3843	**890**	1,432.3190	**990**	1,593.2537
1	146.4506	1	307.3853	1	468.3200	1	629.2548	1	790.1895	1	951.1242	1	1,112.0589	1	1,272.9936	1	1,433.9284	1	1,594.8631
2	148.0599	2	308.9947	2	469.9294	2	630.8641	2	791.7988	2	952.7336	2	1,113.6683	2	1,274.6030	2	1,435.5377	2	1,596.4724
3	149.6693	3	310.6040	3	471.5387	3	632.4735	3	793.4082	3	954.3429	3	1,115.2776	3	1,276.2123	3	1,437.1471	3	1 598.0818
4	151.2786	4	312.2134	4	473.1481	4	634.0828	4	795.0175	4	955.9522	4	1,116.8870	4	1,277.8217	4	1,438.7564	4	1,599.6911
5	152.8880	5	313.8227	5	474.7574	5	635.6922	5	796.6269	5	957.5616	5	1,118.4963	5	1,279.4310	5	1,440.3658	5	1,601.3005
6	154.4973	6	315.4321	6	476.3668	6	637.3015	6	798.2362	6	959.1709	6	1,120.1057	6	1,281.0404	6	1,441.9751	6	1,602.9098
7	156.1067	7	317.0414	7	477.9761	7	638.9108	7	799.8456	7	960.7803	7	1,121.7150	7	1,282.6497	7	1,443.5845	7	1,604.5192
8	157.7160	8	318.6507	8	479.5855	8	640.5202	8	801.4549	8	962.3896	8	1,123.3244	8	1,284.2591	8	1,445.1938	8	1,606.1285
9	159.3254	9	320.2601	9	481.1948	9	642.1295	9	803.0643	9	963.9990	9	1,124.9337	9	1,285.8684	9	1,446.8031	9	1,607.7379

LENGTH—KILOMETERS TO MILES

[Reduction factor: 1 kilometer=0.6213699495 mile]

Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles
0		100	62.13699	200	124.27399	300	186.41098	400	248.54798	500	310.68497	600	372.82197	700	434.95896	800	497.09596	900	559.23295
1	0.62137	1	62.75836	1	124.89536	1	187.03235	1	249.16935	1	311.30634	1	373.44334	1	435.58033	1	497.71733	1	559.85432
2	1.24274	2	63.37973	2	125.51673	2	187.65372	2	249.79072	2	311.92771	2	374.06471	2	436.20170	2	498.33870	2	560.47569
3	1.86411	3	64.00110	3	126.13810	3	188.27509	3	250.41209	3	312.54908	3	374.68608	3	436.82307	3	498.96007	3	561.09706
4	2.48548	4	64.62247	4	126.75947	4	188.89646	4	251.03346	4	313.17045	4	375.30745	4	437.44444	4	499.58144	4	561.71843
5	3.10685	5	65.24384	5	127.38084	5	189.51783	5	251.65483	5	313.79182	5	375.92882	5	438.06581	5	500.20281	5	562.33980
6	3.72822	6	65.86521	6	128.00221	6	190.13920	6	252.27620	6	314.41319	6	376.55019	6	438.68718	6	500.82418	6	562.96117
7	4.34959	7	66.48658	7	128.62358	7	190.76057	7	252.89757	7	315.03456	7	377.17156	7	439.30855	7	501.44555	7	563.58254
8	4.97096	8	67.10795	8	129.24495	8	191.38194	8	253.51894	8	315.65593	8	377.79293	8	439.92992	8	502.06692	8	564.20391
9	5.59233	9	67.72932	9	129.86632	9	192.00331	9	254.14031	9	316.27730	9	378.41430	9	440.55129	9	502.68829	9	564.82528
10	6.21370	110	68.35069	210	130.48769	310	192.62468	410	254.76168	510	316.89867	610	379.03567	710	441.17266	810	503.30966	910	565.44665
1	6.83507	1	68.97206	1	131.10906	1	193.24605	1	255.38305	1	317.52004	1	379.65704	1	441.79403	1	503.93103	1	566.06802
2	7.45644	2	69.59343	2	131.73043	2	193.86742	2	256.00442	2	318.14141	2	380.27841	2	442.41540	2	504.55240	2	566.68939
3	8.07781	3	70.21480	3	132.35180	3	194.48879	3	256.62579	3	318.76278	3	380.89978	3	443.03677	3	505.17377	3	567.31076
4	8.69918	4	70.83617	4	132.97317	4	195.11016	4	257.24716	4	319.38415	4	381.52115	4	443.65814	4	505.79514	4	567.93213
5	9.32055	5	71.45754	5	133.59454	5	195.73153	5	257.86853	5	320.00552	5	382.14252	5	444.27951	5	506.41651	5	568.55350
6	9.94192	6	72.07891	6	134.21591	6	196.35290	6	258.48990	6	320.62689	6	382.76389	6	444.90088	6	507.03788	6	569.17487
7	10.56329	7	72.70028	7	134.83728	7	196.97427	7	259.11127	7	321.24826	7	383.38526	7	445.52225	7	507.65925	7	569.79624
8	11.18466	8	73.32165	8	135.45865	8	197.59564	8	259.73264	8	321.86963	8	384.00663	8	446.14362	8	508.28062	8	570.41761
9	11.80603	9	73.94302	9	136.08002	9	198.21701	9	260.35401	9	322.49100	9	384.62800	9	446.76499	9	508.90199	9	571.03898
20	12.42740	120	74.56439	220	136.70139	320	198.83838	420	260.97538	520	323.11237	620	385.24937	720	447.38636	820	509.52336	920	571.66035
1	13.04877	1	75.18576	1	137.32276	1	199.45975	1	261.59675	1	323.73374	1	385.87074	1	448.00773	1	510.14473	1	572.28172
2	13.67014	2	75.80713	2	137.94413	2	200.08112	2	262.21812	2	324.35511	2	386.49211	2	448.62910	2	510.76610	2	572.90309
3	14.29151	3	76.42850	3	138.56550	3	200.70249	3	262.83949	3	324.97648	3	387.11348	3	449.25047	3	511.38747	3	573.52446
4	14.91288	4	77.04987	4	139.18687	4	201.32386	4	263.46086	4	325.59785	4	387.73485	4	449.87184	4	512.00884	4	574.14583
5	15.53425	5	77.67124	5	139.80824	5	201.94523	5	264.08223	5	326.21922	5	388.35622	5	450.49321	5	512.63021	5	574.76720
6	16.15562	6	78.29261	6	140.42961	6	202.56660	6	264.70360	6	326.84059	6	388.97759	6	451.11458	6	513.25158	6	575.38857
7	16.77699	7	78.91398	7	141.05098	7	203.18797	7	265.32497	7	327.46196	7	389.59896	7	451.73595	7	513.87295	7	576.00994
8	17.39836	8	79.53535	8	141.67235	8	203.80934	8	265.94634	8	328.08333	8	390.22033	8	452.35732	8	514.49432	8	576.63131
9	18.01973	9	80.15672	9	142.29372	9	204.43071	9	266.56771	9	328.70470	9	390.84170	9	452.97869	9	515.11569	9	577.25268
30	18.64110	130	80.77809	230	142.91509	330	205.05208	430	267.18908	530	329.32607	630	391.46307	730	453.60006	830	515.73706	930	577.87405
1	19.26247	1	81.39946	1	143.53646	1	205.67345	1	267.81045	1	329.94744	1	392.08444	1	454.22143	1	516.35843	1	578.49542
2	19.88384	2	82.02083	2	144.15783	2	206.29482	2	268.43182	2	330.56881	2	392.70581	2	454.84280	2	516.97980	2	579.11679
3	20.50521	3	82.64220	3	144.77920	3	206.91619	3	269.05319	3	331.19018	3	393.32718	3	455.46417	3	517.60117	3	579.73816
4	21.12658	4	83.26357	4	145.40057	4	207.53756	4	269.67456	4	331.81155	4	393.94855	4	456.08554	4	518.22254	4	580.35953
5	21.74795	5	83.88494	5	146.02194	5	208.15893	5	270.29593	5	332.43292	5	394.56992	5	456.70691	5	518.84391	5	580.98090
6	22.36932	6	84.50631	6	146.64331	6	208.78030	6	270.91730	6	333.05429	6	395.19129	6	457.32828	6	519.46528	6	581.60227
7	22.99069	7	85.12768	7	147.26468	7	209.40167	7	271.53867	7	333.67566	7	395.81266	7	457.94965	7	520.08665	7	582.22364
8	23.61206	8	85.74905	8	147.88605	8	210.02304	8	272.16004	8	334.29703	8	396.43403	8	458.57102	8	520.70802	8	582.84501
9	24.23343	9	86.37042	9	148.50742	9	210.64441	9	272.78141	9	334.91840	9	397.05540	9	459.19239	9	521.32939	9	583.46638
40	24.85480	140	86.99179	240	149.12879	340	211.26578	440	273.40278	540	335.53977	640	397.67677	740	459.81376	840	521.95076	940	584.08775
1	25.47617	1	87.61316	1	149.75016	1	211.88715	1	274.02415	1	336.16114	1	398.29814	1	460.43513	1	522.57213	1	584.70912
2	26.09754	2	88.23453	2	150.37153	2	212.50852	2	274.64552	2	336.78251	2	398.91951	2	461.05650	2	523.19350	2	585.33049
3	26.71891	3	88.85590	3	150.99290	3	213.12989	3	275.26689	3	337.40388	3	399.54088	3	461.67787	3	523.81487	3	585.95186
4	27.34028	4	89.47727	4	151.61427	4	213.75126	4	275.88826	4	338.02525	4	400.16225	4	462.29924	4	524.43624	4	586.57323
5	27.96165	5	90.09864	5	152.23564	5	214.37263	5	276.50963	5	338.64662	5	400.78362	5	462.92061	5	525.05761	5	587.19460
6	28.58302	6	90.72001	6	152.85701	6	214.99400	6	277.13100	6	339.26799	6	401.40499	6	463.54198	6	525.67898	6	587.81597
7	29.20439	7	91.34138	7	153.47838	7	215.61537	7	277.75237	7	339.88936	7	402.02636	7	464.16335	7	526.30035	7	588.43734
8	29.82576	8	91.96275	8	154.09975	8	216.23674	8	278.37374	8	340.51073	8	402.64773	8	464.78472	8	526.92172	8	589.05871
9	30.44713	9	92.58412	9	154.72112	9	216.85811	9	278.99511	9	341.13210	9	403.26910	9	465.40609	9	527.54309	9	589.68008

50	31.06850	**150**	93.20549	**250**	155.34249	**350**	217.47948	**450**	279.61648	**550**	341.75347	**650**	403.89047	**750**	466.02746	**850**	528.16446	**950**	590.30145
1	31.68987	1	93.82686	1	155.96386	1	218.10085	1	280.23785	1	342.37484	1	404.51184	1	466.64883	1	528.78583	1	590.92282
2	32.31124	2	94.44823	2	156.58523	2	218.72222	2	280.85922	2	342.99621	2	405.13321	2	467.27020	2	529.40720	2	591.54419
3	32.93261	3	95.06960	3	157.20660	3	219.34359	3	281.48059	3	343.61758	3	405.75458	3	467.89157	3	530.02857	3	592.16556
4	33.55398	4	95.69097	4	157.82797	4	219.96496	4	282.10196	4	344.23895	4	406.37595	4	468.51294	4	530.64994	4	592.78693
5	34.17535	5	96.31234	5	158.44934	5	220.58633	5	282.72333	5	344.86032	5	406.99732	5	469.13431	5	531.27131	5	593.40830
6	34.79672	6	96.93371	6	159.07071	6	221.20770	6	283.34470	6	345.48169	6	407.61869	6	469.75568	6	531.89268	6	594.02967
7	35.41809	7	97.55508	7	159.69208	7	221.82907	7	283.96607	7	346.10306	7	408.24006	7	470.37705	7	532.51405	7	594.65104
8	36.03946	8	98.17645	8	160.31345	8	222.45044	8	284.58744	8	346.72443	8	408.86143	8	470.99842	8	533.13542	8	595.27241
9	36.66083	9	98.79782	9	160.93482	9	223.07181	9	285.20881	9	347.34580	9	409.48280	9	471.61979	9	533.75679	9	595.89378
60	37.28220	**160**	99.41919	**260**	161.55619	**360**	223.69318	**460**	285.83018	**560**	347.96717	**660**	410.10417	**760**	472.24116	**860**	534.37816	**960**	596.51515
1	37.90357	1	100.04056	1	162.17756	1	224.31455	1	286.45155	1	348.58854	1	410.72554	1	472.86253	1	534.99953	1	597.13652
2	38.52494	2	100.66193	2	162.79893	2	224.93592	2	287.07292	2	349.20991	2	411.34691	2	473.48390	2	535.62090	2	597.75789
3	39.14631	3	101.28330	3	163.42030	3	225.55729	3	287.69429	3	349.83128	3	411.96828	3	474.10527	3	536.24227	3	598.37926
4	39.76768	4	101.90467	4	164.04167	4	226.17866	4	288.31566	4	350.45265	4	412.58965	4	474.72664	4	536.86364	4	599.00063
5	40.38905	5	102.52604	5	164.66304	5	226.80003	5	288.93703	5	351.07402	5	413.21102	5	475.34801	5	537.48501	5	599.62200
6	41.01042	6	103.14741	6	165.28441	6	227.42140	6	289.55840	6	351.69539	6	413.83239	6	475.96938	6	538.10638	6	600.24337
7	41.63179	7	103.76878	7	165.90578	7	228.04277	7	290.17977	7	352.31676	7	414.45376	7	476.59075	7	538.72775	7	600.86474
8	42.25316	8	104.39015	8	166.52715	8	228.66414	8	290.80114	8	352.93813	8	415.07513	8	477.21212	8	539.34912	8	601.48611
9	42.87453	9	105.01152	9	167.14852	9	229.28551	9	291.42251	9	353.55950	9	415.69650	9	477.83349	9	539.97049	9	602.10748
70	43.49590	**170**	105.63289	**270**	167.76989	**370**	229.90688	**470**	292.04388	**570**	354.18087	**670**	416.31787	**770**	478.45486	**870**	540.59186	**970**	602.72885
1	44.11727	1	106.25426	1	168.39126	1	230.52825	1	292.66525	1	354.80224	1	416.93924	1	479.07623	1	541.21323	1	603.35022
2	44.73864	2	106.87563	2	169.01263	2	231.14962	2	293.28662	2	355.42361	2	417.56061	2	479.69760	2	541.83460	2	603.97159
3	45.36001	3	107.49700	3	169.63400	3	231.77099	3	293.90799	3	356.04498	3	418.18198	3	480.31897	3	542.45597	3	604.59296
4	45.98138	4	108.11837	4	170.25537	4	232.39236	4	294.52936	4	356.66635	4	418.80335	4	480.94034	4	543.07734	4	605.21433
5	46.60275	5	108.73974	5	170.87674	5	233.01373	5	295.15073	5	357.28772	5	419.42472	5	481.56171	5	543.69871	5	605.83570
6	47.22412	6	109.36111	6	171.49811	6	233.63510	6	295.77210	6	357.90909	6	420.04609	6	482.18308	6	544.32008	6	606.45707
7	47.84549	7	109.98248	7	172.11948	7	234.25647	7	296.39347	7	358.53046	7	420.66746	7	482.80445	7	544.94145	7	607.07844
8	48.46686	8	110.60385	8	172.74085	8	234.87784	8	297.01484	8	359.15183	8	421.28883	8	483.42582	8	545.56282	8	607.69981
9	49.08823	9	111.22522	9	173.36222	9	235.49921	9	297.63621	9	359.77320	9	421.91020	9	484.04719	9	546.18419	9	608.32118
80	49.70960	**180**	111.84659	**280**	173.98359	**380**	236.12058	**480**	298.25758	**580**	360.39457	**680**	422.53157	**780**	484.66856	**880**	546.80556	**980**	608.94255
1	50.33097	1	112.46796	1	174.60496	1	236.74195	1	298.87895	1	361.01594	1	423.15294	1	485.28993	1	547.42693	1	609.56392
2	50.95234	2	113.08933	2	175.22633	2	237.36332	2	299.50032	2	361.63731	2	423.77431	2	485.91130	2	548.04830	2	610.18529
3	51.57371	3	113.71070	3	175.84770	3	237.98469	3	300.12169	3	362.25868	3	424.39568	3	486.53267	3	548.66967	3	610.80666
4	52.19508	4	114.33207	4	176.46907	4	238.60606	4	300.74306	4	362.88005	4	425.01705	4	487.15404	4	549.29104	4	611.42803
5	52.81645	5	114.95344	5	177.09044	5	239.22743	5	301.36443	5	363.50142	5	425.63842	5	487.77541	5	549.91241	5	612.04940
6	53.43782	6	115.57481	6	177.71181	6	239.84880	6	301.98580	6	364.12279	6	426.25979	6	488.39678	6	550.53378	6	612.67077
7	54.05919	7	116.19618	7	178.33318	7	240.47017	7	302.60717	7	364.74416	7	426.88116	7	489.01815	7	551.15515	7	613.29214
8	54.68056	8	116.81755	8	178.95455	8	241.09154	8	303.22854	8	365.36553	8	427.50253	8	489.63952	8	551.77652	8	613.91351
9	55.30193	9	117.43892	9	179.57592	9	241.71291	9	303.84991	9	365.98690	9	428.12390	9	490.26089	9	552.39789	9	614.53488
90	55.92330	**190**	118.06029	**290**	180.19729	**390**	242.33428	**490**	304.47128	**590**	366.60827	**690**	428.74527	**790**	490.88226	**890**	553.01926	**990**	615.15625
1	56.54467	1	118.68166	1	180.81866	1	242.95565	1	305.09265	1	367.22964	1	429.36664	1	491.50363	1	553.64062	1	615.77762
2	57.16604	2	119.30303	2	181.44003	2	243.57702	2	305.71402	2	367.85101	2	429.98801	2	492.12500	2	554.26199	2	616.39899
3	57.78741	3	119.92440	3	182.06140	3	244.19839	3	306.33539	3	368.47238	3	430.60937	3	492.74637	3	554.88336	3	617.02036
4	58.40878	4	120.54577	4	182.68277	4	244.81976	4	306.95676	4	369.09375	4	431.23074	4	493.36774	4	555.50473	4	617.64173
5	59.03015	5	121.16714	5	183.30414	5	245.44113	5	307.57812	5	369.71512	5	431.85211	5	493.98911	5	556.12610	5	618.26310
6	59.65152	6	121.78851	6	183.92551	6	246.06250	6	308.19949	6	370.33649	6	432.47348	6	494.61048	6	556.74747	6	618.88447
7	60.27289	7	122.40988	7	184.54687	7	246.68387	7	308.82086	7	370.95786	7	433.09485	7	495.23185	7	557.36884	7	619.50584
8	60.89426	8	123.03125	8	185.16824	8	247.30524	8	309.44223	8	371.57923	8	433.71622	8	495.85322	8	557.99021	8	620.12721
9	61.51562	9	123.65262	9	185.78961	9	247.92661	9	310.06360	9	372.20060	9	434.33759	9	496.47459	9	558.61158	9	620.74858

AREA—ACRES TO HECTARES

[Reduction factor: 1 acre=0.4046872610 hectare]

Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares
0		100	40.46873	200	80.93745	300	121.40618	400	161.87490	500	202.34363	600	242.81236	700	283.28108	800	323.74981	900	364.21853
1	0.40469	1	40.87341	1	81.34214	1	121.81087	1	162.27959	1	202.74832	1	243.21704	1	283.68577	1	324.15450	1	364.62322
2	0.80937	2	41.27810	2	81.74683	2	122.21555	2	162.68428	2	203.15301	2	243.62173	2	284.09046	2	324.55918	2	365.02791
3	1.21406	3	41.68279	3	82.15151	3	122.62024	3	163.08897	3	203.55769	3	244.02642	3	284.49514	3	324.96387	3	365.43260
4	1.61875	4	42.08748	4	82.55620	4	123.02493	4	163.49365	4	203.96238	4	244.43111	4	284.89983	4	325.36856	4	365.83728
5	2.02344	5	42.49216	5	82.96089	5	123.42961	5	163.89834	5	204.36707	5	244.83579	5	285.30452	5	325.77325	5	366.24197
6	2.42812	6	42.89685	6	83.36558	6	123.83430	6	164.30303	6	204.77175	6	245.24048	6	285.70921	6	326.17793	6	366.64666
7	2.83281	7	43.30154	7	83.77026	7	124.23899	7	164.70772	7	205.17644	7	245.64517	7	286.11389	7	326.58262	7	367.05135
8	3.23750	8	43.70622	8	84.17495	8	124.64368	8	165.11240	8	205.58113	8	246.04985	8	286.51858	8	326.98731	8	367.45603
9	3.64219	9	44.11091	9	84.57964	9	125.04836	9	165.51709	9	205.98582	9	246.45454	9	286.92327	9	327.39199	9	367.86072
10	4.04687	110	44.51560	210	84.98432	310	125.45305	410	165.92178	510	206.39050	610	246.85923	710	287.32796	810	327.79668	910	368.26541
1	4.45156	1	44.92029	1	85.38901	1	125.85774	1	166.32646	1	206.79519	1	247.26392	1	287.73264	1	328.20137	1	368.67009
2	4.85625	2	45.32497	2	85.79370	2	126.26243	2	166.73115	2	207.19988	2	247.66860	2	288.13733	2	328.60606	2	369.07478
3	5.26093	3	45.72966	3	86.19839	3	126.66711	3	167.13584	3	207.60456	3	248.07329	3	288.54202	3	329.01074	3	369.47947
4	5.66562	4	46.13435	4	86.60307	4	127.07180	4	167.54053	4	208.00925	4	248.47798	4	288.94670	4	329.41543	4	369.88416
5	6.07031	5	46.53904	5	87.00776	5	127.47649	5	167.94521	5	208.41394	5	248.88267	5	289.35139	5	329.82012	5	370.28884
6	6.47500	6	46.94372	6	87.41245	6	127.88117	6	168.34990	6	208.81863	6	249.28735	6	289.75608	6	330.22480	6	370.69353
7	6.87968	7	47.34841	7	87.81714	7	128.28586	7	168.75459	7	209.22331	7	249.69204	7	290.16077	7	330.62949	7	371.09822
8	7.28437	8	47.75310	8	88.22182	8	128.69055	8	169.15928	8	209.62800	8	250.09673	8	290.56545	8	331.03418	8	371.50291
9	7.68906	9	48.15778	9	88.62651	9	129.09524	9	169.56396	9	210.03269	9	250.50141	9	290.97014	9	331.43887	9	371.90759
20	8.09375	120	48.56247	220	89.03120	320	129.49992	420	169.96865	520	210.43738	620	250.90610	720	291.37483	820	331.84355	920	372.31228
1	8.49843	1	48.96716	1	89.43588	1	129.90461	1	170.37334	1	210.84206	1	251.31079	1	291.77952	1	332.24824	1	372.71697
2	8.90312	2	49.37185	2	89.84057	2	130.30930	2	170.77802	2	211.24675	2	251.71548	2	292.18420	2	332.65293	2	373.12165
3	9.30781	3	49.77653	3	90.24526	3	130.71399	3	171.18271	3	211.65144	3	252.12016	3	292.58889	3	333.05762	3	373.52634
4	9.71249	4	50.18122	4	90.64995	4	131.11867	4	171.58740	4	212.05612	4	252.52485	4	292.99358	4	333.46230	4	373.93103
5	10.11718	5	50.58591	5	91.05463	5	131.52336	5	171.99209	5	212.46081	5	252.92954	5	293.39826	5	333.86699	5	374.33572
6	10.52187	6	50.99059	6	91.45932	6	131.92805	6	172.39677	6	212.86550	6	253.33423	6	293.80295	6	334.27168	6	374.74040
7	10.92656	7	51.39528	7	91.86401	7	132.33273	7	172.80146	7	213.27019	7	253.73891	7	294.20764	7	334.67636	7	375.14509
8	11.33124	8	51.79997	8	92.26870	8	132.73742	8	173.20615	8	213.67487	8	254.14360	8	294.61233	8	335.08105	8	375.54978
9	11.73593	9	52.20466	9	92.67338	9	133.14211	9	173.61083	9	214.07956	9	254.54829	9	295.01701	9	335.48574	9	375.95447
30	12.14062	130	52.60934	230	93.07807	330	133.54680	430	174.01552	530	214.48425	630	254.95297	730	295.42170	830	335.89043	930	376.35915
1	12.54531	1	53.01403	1	93.48276	1	133.95148	1	174.42021	1	214.88894	1	255.35766	1	295.82639	1	336.29511	1	376.76384
2	12.94999	2	53.41872	2	93.88744	2	134.35617	2	174.82490	2	215.29362	2	255.76235	2	296.23108	2	336.69980	2	377.16853
3	13.35468	3	53.82341	3	94.29213	3	134.76086	3	175.22958	3	215.69831	3	256.16704	3	296.63576	3	337.10449	3	377.57321
4	13.75937	4	54.22809	4	94.69682	4	135.16555	4	175.63427	4	216.10300	4	256.57172	4	297.04045	4	337.50918	4	377.97790
5	14.16405	5	54.63278	5	95.10151	5	135.57023	5	176.03896	5	216.50768	5	256.97641	5	297.44514	5	337.91386	5	378.38259
6	14.56874	6	55.03747	6	95.50619	6	135.97492	6	176.44365	6	216.91237	6	257.38110	6	297.84982	6	338.31855	6	378.78728
7	14.97343	7	55.44215	7	95.91088	7	136.37961	7	176.84833	7	217.31706	7	257.78579	7	298.25451	7	338.72324	7	379.19196
8	15.37812	8	55.84684	8	96.31557	8	136.78429	8	177.25302	8	217.72175	8	258.19047	8	298.65920	8	339.12792	8	379.59665
9	15.78280	9	56.25153	9	96.72026	9	137.18898	9	177.65771	9	218.12643	9	258.59516	9	299.06389	9	339.53261	9	380.00134
40	16.18749	140	56.65622	240	97.12494	340	137.59367	440	178.06239	540	218.53112	640	258.99985	740	299.46857	840	339.93730	940	380.40603
1	16.59218	1	57.06090	1	97.52963	1	137.99836	1	178.46708	1	218.93581	1	259.40453	1	299.87326	1	340.34199	1	380.81071
2	16.99686	2	57.46559	2	97.93432	2	138.40304	2	178.87177	2	219.34050	2	259.80922	2	300.27795	2	340.74667	2	381.21540
3	17.40155	3	57.87028	3	98.33900	3	138.80773	3	179.27646	3	219.74518	3	260.21391	3	300.68263	3	341.15136	3	381.62009
4	17.80624	4	58.27497	4	98.74369	4	139.21242	4	179.68114	4	220.14987	4	260.61860	4	301.08732	4	341.55605	4	382.02477
5	18.21093	5	58.67965	5	99.14838	5	139.61711	5	180.08583	5	220.55456	5	261.02328	5	301.49201	5	341.96074	5	382.42946
6	18.61561	6	59.08434	6	99.55307	6	140.02179	6	180.49052	6	220.95924	6	261.42797	6	301.89670	6	342.36542	6	382.83415
7	19.02030	7	59.48903	7	99.95775	7	140.42648	7	180.89521	7	221.36393	7	261.83266	7	302.30138	7	342.77011	7	383.23884
8	19.42499	8	59.89371	8	100.36244	8	140.83117	8	181.29989	8	221.76862	8	262.23735	8	302.70607	8	343.17480	8	383.64352
9	19.82968	9	60.29840	9	100.76713	9	141.23585	9	181.70458	9	222.17331	9	262.64203	9	303.11076	9	343.57948	9	384.04821

50	20.23436	**150**	60.70309	**250**	101.17182	**350**	141.64054	**450**	182.10927	**550**	222.57799	**650**	263.04672	**750**	303.51545	**850**	343.98417	**950**	384.45290
1	20.63905	1	61.10778	1	101.57650	1	142.04523	1	182.51395	1	222.98268	1	263.45141	1	303.92013	1	344.38886	1	384.85759
2	21.04374	2	61.51246	2	101.98119	2	142.44992	2	182.91864	2	223.38737	2	263.85609	2	304.32482	2	344.79355	2	385.26227
3	21.44842	3	61.91715	3	102.38588	3	142.85460	3	183.32333	3	223.79206	3	264.26078	3	304.72951	3	345.19823	3	385.66696
4	21.85311	4	62.32184	4	102.79056	4	143.25929	4	183.72802	4	224.19674	4	264.66547	4	305.13419	4	345.60292	4	386.07165
5	22.25780	5	62.72653	5	103.19525	5	143.66398	5	184.13270	5	224.60143	5	265.07016	5	305.53888	5	346.00761	5	386.47633
6	22.66249	6	63.13121	6	103.59994	6	144.06866	6	184.53739	6	225.00612	6	265.47484	6	305.94357	6	346.41230	6	386.88102
7	23.06717	7	63.53590	7	104.00463	7	144.47335	7	184.94208	7	225.41080	7	265.87953	7	306.34826	7	346.81698	7	387.28571
8	23.47186	8	63.94059	8	104.40931	8	104.87804	8	185.34677	8	225.81549	8	266.28422	8	306.75294	8	347.22167	8	387.69040
9	23.87655	9	64.34527	9	104.81400	9	145.28273	9	185.75145	9	226.22018	9	266.68890	9	307.15763	9	347.62636	9	388.09508
60	24.28124	**160**	64.74996	**260**	105.21869	**360**	145.68741	**460**	186.15614	**560**	226.62487	**660**	267.09359	**760**	307.56232	**860**	348.03104	**960**	388.49977
1	24.68592	1	65.15465	1	105.62338	1	146.09210	1	186.56083	1	227.02955	1	267.49828	1	307.96701	1	348.43573	1	388.90446
2	25.09061	2	65.55934	2	106.02806	2	146.49679	2	186.96551	2	227.43424	2	267.90297	2	308.37169	2	348.84042	2	389.30915
3	25.49530	3	65.96402	3	106.43275	3	146.90148	3	187.37020	3	227.83893	3	268.30765	3	308.77638	3	349.24511	3	389.71383
4	25.89998	4	66.36871	4	106.83744	4	147.30616	4	187.77489	4	228.24362	4	268.71234	4	309.18107	4	349.64979	4	390.11852
5	26.30467	5	66.77340	5	107.24212	5	147.71085	5	188.17958	5	228.64830	5	269.11703	5	309.58575	5	350.05448	5	390.52321
6	26.70936	6	67.17809	6	107.64681	6	148.11554	6	188.58426	6	229.05299	6	269.52172	6	309.99044	6	350.45917	6	390.92789
7	27.11405	7	67.58277	7	108.05150	7	148.52022	7	188.98895	7	229.45768	7	269.92640	7	310.39513	7	350.86386	7	391.33258
8	27.51873	8	67.98746	8	108.45619	8	148.92491	8	189.39364	8	229.86236	8	270.33109	8	310.79982	8	351.26854	8	391.73727
9	27.92342	9	68.39215	9	108.86087	9	149.32960	9	189.79833	9	230.26705	9	270.73578	9	311.20450	9	351.67323	9	392.14196
70	28.32811	**170**	68.79683	**270**	109.26556	**370**	149.73429	**470**	190.20301	**570**	230.67174	**670**	271.14046	**770**	311.60919	**870**	352.07792	**970**	392.54664
1	28.73280	1	69.20152	1	109.67025	1	150.13897	1	190.60770	1	231.07643	1	271.54515	1	312.01388	1	352.48260	1	392.95133
2	29.13748	2	69.60621	2	110.07493	2	150.54366	2	191.01239	2	231.48111	2	271.94984	2	312.41857	2	352.88729	2	393.35602
3	29.54217	3	70.01090	3	110.47962	3	150.94835	3	191.41707	3	231.88580	3	272.35453	3	312.82325	3	353.29198	3	393.76070
4	29.94686	4	70.41558	4	110.88431	4	151.35304	4	191.82176	4	232.29049	4	272.75921	4	313.22794	4	353.69667	4	394.16539
5	30.35154	5	70.82027	5	111.28900	5	151.75772	5	192.22645	5	232.69518	5	273.16390	5	313.63263	5	354.10135	5	394.57008
6	30.75623	6	71.22496	6	111.69368	6	152.16241	6	192.63114	6	233.09986	6	273.56859	6	314.03731	6	354.50604	6	394.97477
7	31.16092	7	71.62965	7	112.09837	7	152.56710	7	193.03582	7	233.50455	7	273.97328	7	314.44200	7	354.91073	7	395.37945
8	31.56561	8	72.03433	8	112.50306	8	152.97178	8	193.44051	8	233.90924	8	274.37796	8	314.84669	8	355.31542	8	395.78414
9	31.97029	9	72.43902	9	112.90775	9	153.37647	9	193.84520	9	234.31392	9	274.78265	9	315.25138	9	355.72010	9	396.18883
80	32.37498	**180**	72.84371	**280**	113.31243	**380**	153.78116	**480**	194.24989	**580**	234.71861	**680**	275.18734	**780**	315.65606	**880**	356.12479	**980**	396.59352
1	32.77967	1	73.24839	1	113.71712	1	154.18585	1	194.65457	1	235.12330	1	275.59202	1	316.06075	1	356.52948	1	396.99820
2	33.18436	2	73.65308	2	114.12181	2	154.59053	2	195.05926	2	235.52799	2	275.99671	2	316.46544	2	356.93416	2	397.40289
3	33.58904	3	74.05777	3	114.52649	3	154.99522	3	195.46395	3	235.93267	3	276.40140	3	316.87013	3	357.33885	3	397.80758
4	33.99373	4	74.46246	4	114.93118	4	155.39991	4	195.86863	4	236.33736	4	276.80609	4	317.27481	4	357.74354	4	398.21226
5	34.39842	5	74.86714	5	115.33587	5	155.80460	5	196.27332	5	236.74205	5	277.21077	5	317.67950	5	358.14823	5	398.61695
6	34.80310	6	75.27183	6	115.74056	6	156.20928	6	196.67801	6	237.14673	6	277.61546	6	318.08419	6	358.55291	6	399.02164
7	35.20779	7	75.67652	7	116.14524	7	156.61397	7	197.08270	7	237.55142	7	278.02015	7	318.48887	7	358.95760	7	399.42633
8	35.61248	8	76.08121	8	116.54993	8	157.01866	8	197.48738	8	237.95611	8	278.42484	8	318.89356	8	359.36229	8	399.83101
9	36.01717	9	76.48589	9	116.95462	9	157.42334	9	197.89207	9	238.36080	9	278.82952	9	319.29825	9	359.76698	9	400.23570
90	36.42185	**190**	76.89058	**290**	117.35931	**390**	157.82803	**490**	198.29676	**590**	238.76548	**690**	279.23421	**790**	319.70294	**890**	360.17166	**990**	400.64039
1	36.82654	1	77.29527	1	117.76399	1	158.23272	1	198.70145	1	239.17017	1	279.63890	1	320.10762	1	360.57635	1	401.04508
2	37.23123	2	77.69995	2	118.16868	2	158.63741	2	199.10613	2	239.57486	2	280.04358	2	320.51231	2	360.98104	2	401.44976
3	37.63592	3	78.10464	3	118.57337	3	159.04209	3	199.51082	3	239.97955	3	280.44827	3	320.91700	3	361.38572	3	401.85445
4	38.04060	4	78.50933	4	118.97805	4	159.44678	4	199.91551	4	240.38423	4	280.85296	4	321.32169	4	361.79041	4	402.25914
5	38.44529	5	78.91402	5	119.38274	5	159.85147	5	200.32019	5	240.78892	5	281.25765	5	321.72637	5	362.19510	5	402.66382
6	38.84998	6	79.31870	6	119.78743	6	160.25616	6	200.72488	6	241.19361	6	281.66233	6	322.13106	6	362.59979	6	403.06851
7	39.25466	7	79.72339	7	120.19212	7	160.66084	7	201.12957	7	241.59829	7	282.06702	7	322.53575	7	363.00447	7	403.47320
8	39.65935	8	80.12808	8	120.59680	8	161.06553	8	201.53426	8	242.00298	8	282.47171	8	322.94043	8	363.40916	8	403.87789
9	40.06404	9	80.53276	9	121.00149	9	161.47022	9	201.93894	9	242.40767	9	282.87640	9	323.34512	9	363.81385	9	404.28257

AREA—HECTARES TO ACRES

[Reduction factor: 1 hectare=2.471043930 acres]

Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres
0		100	247.10439	200	494.20879	300	741.31318	400	988.41757	500	1,235.52197	600	1,482.62636	700	1,729.73075	800	1,976.83514	900	2,223.93954
1	2.47104	1	249.57544	1	496.67983	1	743.78422	1	990.88862	1	1,237.99301	1	1,485.09740	1	1,732.20180	1	1,979.30619	1	2,226.41058
2	4.94209	2	252.04648	2	499.15087	2	746.25527	2	993.35966	2	1,240.46405	2	1,487.56845	2	1,734.67284	2	1,981.77723	2	2,228.88163
3	7.41313	3	254.51752	3	501.62192	3	748.72631	3	995.83070	3	1,242.93510	3	1,490.03949	3	1,737.14388	3	1,984.24828	3	2,231.35267
4	9.88418	4	256.98857	4	504.09296	4	751.19735	4	998.30175	4	1,245.40614	4	1,492.51053	4	1,739.61493	4	1,986.71932	4	2,233.82371
5	12.35522	5	259.45961	5	506.56401	5	753.66840	5	1,000.77279	5	1,247.87718	5	1,494.98158	5	1,742.08597	5	1,989.19036	5	2,236.29476
6	14.82626	6	261.93066	6	509.03505	6	756.13944	6	1,003.24384	6	1,250.34823	6	1,497.45262	6	1,744.55701	6	1,991.66141	6	2,238.76580
7	17.29731	7	264.40170	7	511.50609	7	758.61049	7	1,005.71488	7	1,252.81927	7	1,499.92367	7	1,747.02806	7	1,994.13245	7	2,241.23684
8	19.76835	8	266.87274	8	513.97714	8	761.08153	8	1,008.18592	8	1,255.29032	8	1,502.39471	8	1,749.49910	8	1,996.60350	8	2,243.70789
9	22.23940	9	269.34379	9	516.44818	9	763.55257	9	1,010.65697	9	1,257.76136	9	1,504.86575	9	1,751.97015	9	1,999.07454	9	2,246.17893
10	24.71044	110	271.81483	210	518.91923	310	766.02362	410	1,013.12801	510	1,260.23240	610	1,507.33680	710	1,754.44119	810	2,001.54558	910	2,248.64998
1	27.18148	1	274.28588	1	521.39027	1	768.49466	1	1,015.59906	1	1,262.70345	1	1,509.80784	1	1,756.91223	1	2,004.01663	1	2,251.12102
2	29.65253	2	276.75692	2	523.86131	2	770.96571	2	1,018.07010	2	1,265.17449	2	1,512.27889	2	1,759.38328	2	2,006.48767	2	2,253.59206
3	32.12357	3	279.22796	3	526.33236	3	773.43675	3	1,020.54114	3	1,267.64554	3	1,514.74993	3	1,761.85432	3	2,008.95872	3	2,256.06311
4	34.59462	4	281.69901	4	528.80340	4	775.90779	4	1,023.01219	4	1,270.11658	4	1,517.22097	4	1,764.32537	4	2,011.42976	4	2,258.53415
5	37.06566	5	284.17005	5	531.27444	5	778.37884	5	1,025.48323	5	1,272.58762	5	1,519.69202	5	1,766.79641	5	2,013.90080	5	2,261.00520
6	39.53670	6	286.64110	6	533.74549	6	780.84988	6	1,027.95427	6	1,275.05867	6	1,522.16306	6	1,769.26745	6	2,016.37185	6	2,263.47624
7	42.00775	7	289.11214	7	536.21653	7	783.32093	7	1,030.42532	7	1,277.52971	7	1,524.63411	7	1,771.73850	7	2,018.84289	7	2,265.94728
8	44.47879	8	291.58318	8	538.68758	8	785.79197	8	1,032.89636	8	1,280.00076	8	1,527.10515	8	1,774.20954	8	2,021.31394	8	2,268.41833
9	46.94983	9	294.05423	9	541.15862	9	788.26301	9	1,035.36741	9	1,282.47180	9	1,529.57619	9	1,776.68059	9	2,023.78498	9	2,270.88937
20	49.42088	120	296.52527	220	543.62966	320	790.73406	420	1,037.83845	520	1,284.94284	620	1,532.04724	720	1,779.15163	820	2,026.25602	920	2,273.36042
1	51.89192	1	298.99632	1	546.10071	1	793.20510	1	1,040.30949	1	1,287.41389	1	1,534.51828	1	1,781.62267	1	2,028.72707	1	2,275.83146
2	54.36297	2	301.46736	2	548.57175	2	795.67615	2	1,042.78054	2	1,289.88493	2	1,536.98932	2	1,784.09372	2	2,031.19811	2	2,278.30250
3	56.83401	3	303.93840	3	551.04280	3	798.14719	3	1,045.25158	3	1,292.35598	3	1,539.46037	3	1,786.56476	3	2,033.66915	3	2,280.77355
4	59.30505	4	306.40945	4	553.51384	4	800.61823	4	1,047.72263	4	1,294.82702	4	1,541.93141	4	1,789.03581	4	2,036.14020	4	2,283.24459
5	61.77610	5	308.88049	5	555.98488	5	803.08928	5	1,050.19367	5	1,297.29806	5	1,544.40246	5	1,791.50685	5	2,038.61124	5	2,285.71564
6	64.24714	6	311.35154	6	558.45593	6	805.56032	6	1,052.66471	6	1,299.76911	6	1,546.87350	6	1,793.97789	6	2,041.08229	6	2,288.18668
7	66.71819	7	313.82258	7	560.92697	7	808.03137	7	1,055.13576	7	1,302.24015	7	1,549.34454	7	1,796.44894	7	2,043.55333	7	2,290.65772
8	69.18923	8	316.29362	8	563.39802	8	810.50241	8	1,057.60680	8	1,304.71120	8	1,551.81559	8	1,798.91998	8	2,046.02437	8	2,293.12877
9	71.66027	9	318.76467	9	565.86906	9	812.97345	9	1,060.07785	9	1,307.18224	9	1,554.28663	9	1,801.39103	9	2,048.49542	9	2,295.59981
30	74.13132	130	321.23571	230	568.34010	330	815.44450	430	1,062.54889	530	1,309.65328	630	1,556.75768	730	1,803.86207	830	2,050.96646	930	2,298.07086
1	76.60236	1	323.70675	1	570.81115	1	817.91554	1	1,065.01993	1	1,312.12433	1	1,559.22872	1	1,806.33311	1	2,053.43751	1	2,300.54190
2	79.07341	2	326.17780	2	573.28219	2	820.38658	2	1,067.49098	2	1,314.59537	2	1,561.69976	2	1,808.80416	2	2,055.90855	2	2,303.01294
3	81.54445	3	328.64884	3	575.75324	3	822.85763	3	1,069.96202	3	1,317.06641	3	1,564.17081	3	1,811.27520	3	2,058.37959	3	2,305.48399
4	84.01549	4	331.11989	4	578.22428	4	825.32867	4	1,072.43307	4	1,319.53746	4	1,566.64185	4	1,813.74624	4	2,060.85064	4	2,307.95503
5	86.48654	5	333.59093	5	580.69532	5	827.79972	5	1,074.90411	5	1,322.00850	5	1,569.11290	5	1,816.21729	5	2,063.32168	5	2,310.42607
6	88.95758	6	336.06197	6	583.16637	6	830.27076	6	1,077.37515	6	1,324.47955	6	1,571.58394	6	1,818.68833	6	2,065.79273	6	2,312.89712
7	91.42863	7	338.53302	7	585.63741	7	832.74180	7	1,079.84620	7	1,326.95059	7	1,574.05498	7	1,821.15938	7	2,068.26377	7	2,315.36816
8	93.89967	8	341.00406	8	588.10846	8	835.21285	8	1,082.31724	8	1,329.42163	8	1,576.52603	8	1,823.63042	8	2,070.73481	8	2,317.83921
9	96.37071	9	343.47511	9	590.57950	9	837.68389	9	1,084.78829	9	1,331.89268	9	1,578.99707	9	1,826.10146	9	2,073.20586	9	2,320.31025
40	98.84176	140	345.94615	240	593.05054	340	840.15494	440	1,087.25933	540	1,334.36372	640	1,581.46812	740	1,828.57251	840	2,075.67690	940	2,322.78129
1	101.31280	1	348.41719	1	595.52159	1	842.62598	1	1,089.73037	1	1,336.83477	1	1,583.93916	1	1,831.04355	1	2,078.14795	1	2,325.25234
2	103.78385	2	350.88824	2	597.99263	2	845.09702	2	1,092.20142	2	1,339.30581	2	1,586.41020	2	1,833.51460	2	2,080.61899	2	2,327.72338
3	106.25489	3	353.35928	3	600.46367	3	847.56807	3	1,094.67246	3	1,341.77685	3	1,588.88125	3	1,835.98564	3	2,083.09003	3	2,330.19443
4	108.72593	4	355.83033	4	602.93472	4	850.03911	4	1,097.14350	4	1,344.24790	4	1,591.35229	4	1,838.45668	4	2,085.56108	4	2,332.66547
5	111.19698	5	358.30137	5	605.40576	5	852.51016	5	1,099.61455	5	1,346.71894	5	1,593.82334	5	1,840.92773	5	2,088.03212	5	2,335.13651
6	113.66802	6	360.77241	6	607.87681	6	854.98120	6	1,102.08559	6	1,349.18999	6	1,596.29438	6	1,843.39877	6	2,090.50317	6	2,337.60756
7	116.13906	7	363.24346	7	610.34785	7	857.45224	7	1,104.55664	7	1,351.66103	7	1,598.76542	7	1,845.86982	7	2,092.97421	7	2,340.07860
8	118.61011	8	365.71450	8	612.81889	8	859.92329	8	1,107.02768	8	1,354.13207	8	1,601.23647	8	1,848.34086	8	2,095.44525	8	2,342.54965
9	121.08115	9	368.18555	9	615.28994	9	862.39433	9	1,109.49872	9	1,356.60312	9	1,603.70751	9	1,850.81190	9	2,097.91630	9	2,345.02069

50	123.55220	**150**	370.65659	**250**	617.76098	**350**	864.86538	**450**	1,111.96977	**550**	1,359.07416	**650**	1,606.17855	**750**	1,853.28295	**850**	2,100.38734	**950**	2,347.49173
1	126.02324	1	373.12763	1	620.23203	1	867.33642	1	1,114.44081	1	1,361.54521	1	1,608.64960	1	1,855.75399	1	2,102.85838	1	2,349.96278
2	128.49428	2	375.59868	2	622.70307	2	869.80746	2	1,116.91186	2	1,364.01625	2	1,611.12064	2	1,858.22504	2	2,105.32943	2	2,352.43382
3	130.96533	3	378.06972	3	625.17411	3	872.27851	3	1,119.38290	3	1,366.48729	3	1,613.59169	3	1,860.69608	3	2,107.80047	3	2,354.90487
4	133.43637	4	380.54077	4	627.64516	4	874.74955	4	1,121.85394	4	1,368.95834	4	1,616.06273	4	1,863.16712	4	2,110.27152	4	2,357.37591
5	135.90742	5	383.01181	5	630.11620	5	877.22060	5	1,124.32499	5	1,371.42938	5	1,618.53377	5	1,865.63817	5	2,112.74256	5	2,359.84695
6	138.37846	6	385.48285	6	632.58725	6	879.69164	6	1,126.79603	6	1,373.90043	6	1,621.00482	6	1,868.10921	6	2,115.21360	6	2,362.31800
7	140.84950	7	387.95390	7	635.05829	7	882.16268	7	1,129.26708	7	1,376.37147	7	1,623.47586	7	1,870.58026	7	2,117.68465	7	2,364.78904
8	143.32055	8	390.42494	8	637.52933	8	884.63373	8	1,131.73812	8	1,378.84251	8	1,625.94691	8	1,873.05130	8	2,120.15569	8	2,367.26009
9	145.79159	9	392.89598	9	640.00038	9	887.10477	9	1,134.20916	9	1,381.31356	9	1,628.41795	9	1,875.52234	9	2,122.62674	9	2,369.73113
60	148.26264	**160**	395.36703	**260**	642.47142	**360**	889.57581	**460**	1,136.68021	**560**	1,383.78460	**660**	1,630.88899	**760**	1,877.99339	**860**	2,125.09778	**960**	2,372.20217
1	150.73368	1	397.83807	1	644.94247	1	892.04686	1	1,139.15125	1	1,386.25564	1	1,633.36004	1	1,880.46443	1	2,127.56882	1	2,374.67322
2	153.20472	2	400.30912	2	647.41351	2	894.51790	2	1,141.62230	2	1,388.72669	2	1,635.83108	2	1,882.93547	2	2,130.03987	2	2,377.14426
3	155.67577	3	402.78016	3	649.88455	3	896.98895	3	1,144.09334	3	1,391.19773	3	1,638.30213	3	1,885.40652	3	2,132.51091	3	2,379.61530
4	158.14681	4	405.25120	4	652.35560	4	899.45999	4	1,146.56438	4	1,393.66878	4	1,640.77317	4	1,887.87756	4	2,134.98196	4	2,382.08635
5	160.61786	5	407.72225	5	654.82664	5	901.93103	5	1,149.03543	5	1,396.13982	5	1,643.24421	5	1,890.34861	5	2,137 45300	5	2,384.55739
6	163.08890	6	410.19329	6	657.29769	6	904.40208	6	1,151.50647	6	1,398.61086	6	1,645.71526	6	1,892.81965	6	2,139.92404	6	2,387.02844
7	165.55994	7	412.66434	7	659.76873	7	906.87312	7	1,153.97752	7	1,401.08191	7	1,648.18630	7	1,895.29069	7	2,142.39509	7	2,389.49948
8	168.03099	8	415.13538	8	662.23977	8	909.34417	8	1,156.44856	8	1,403.55295	8	1,650.65735	8	1,897.76174	8	2,144.86613	8	2,391.97052
9	170.50203	9	417.60642	9	664.71082	9	911.81521	9	1,158.91960	9	1,406.02400	9	1,653.12839	9	1,900.23278	9	2,147.33718	9	2,394.44157
70	172.97308	**170**	420.07747	**270**	667.18186	**370**	914.28625	**470**	1,161.39065	**570**	1,408.49504	**670**	1,655.59943	**770**	1,902.70383	**870**	2,149.80822	**970**	2,396.91261
1	175.44412	1	422.54851	1	669.65291	1	916.75730	1	1,163.86169	1	1,410.96608	1	1,658.07048	1	1,905.17487	1	2,152.27926	1	2,399.38366
2	177.91516	2	425.01956	2	672.12395	2	919.22834	2	1,166.33273	2	1,413.43713	2	1,660.54152	2	1,907.64591	2	2,154.75031	2	2,401.85470
3	180.38621	3	427.49060	3	674.59499	3	921.69939	3	1,168.80378	3	1,415.90817	3	1,663.01257	3	1,910.11696	3	2,157.22135	3	2,404.32574
4	182.85725	4	429.96164	4	677.06604	4	924.17043	4	1,171.27482	4	1,418.37922	4	1,665.48361	4	1,912.58800	4	2,159.69240	4	2,406.79679
5	185.32829	5	432.43269	5	679.53708	5	926.64147	5	1,173.74587	5	1,420.85026	5	1,667.95465	5	1,915.05905	5	2,162.16344	5	2,409.26783
6	187.79934	6	434.90373	6	682.00812	6	929.11252	6	1,176.21691	6	1,423.32130	6	1,670.42570	6	1,917.53009	6	2,164.63448	6	2,411.73888
7	190.27038	7	437.37478	7	684.47917	7	931.58356	7	1,178.68795	7	1,425.79235	7	1,672.89674	7	1,920.00113	7	2,167.10553	7	2,414.20992
8	192.74143	8	439.84582	8	686.95021	8	934.05461	8	1,181.15900	8	1,428.26339	8	1,675.36778	8	1,922.47218	8	2,169.57657	8	2,416.68096
9	195.21247	9	442.31686	9	689.42126	9	936.52565	9	1,183.63004	9	1,430.73444	9	1,677.83883	9	1,924.94322	9	2,172.04761	9	2,419.15201
80	197.68351	**180**	444.78791	**280**	691.89230	**380**	938.99669	**480**	1,186.10109	**580**	1,433.20548	**680**	1,680.30987	**780**	1,927.41427	**880**	2,174.51866	**980**	2,421.62305
1	200.15456	1	447.25895	1	694.36334	1	941.46774	1	1,188.57213	1	1,435.67652	1	1,682.78092	1	1,929.88531	1	2,176.98970	1	2,424.09410
2	202.62560	2	449.73000	2	696.83439	2	943.93878	2	1,191.04317	2	1,438.14757	2	1,685.25196	2	1,932.35635	2	2,179.46075	2	2,426.56514
3	205.09665	3	452.20104	3	699.30543	3	946.40983	3	1,193.51422	3	1,440.61861	3	1,687.72300	3	1,934.82740	3	2,181.93179	3	2,429.03618
4	207.56769	4	454.67208	4	701.77648	4	948.88087	4	1,195.98526	4	1,443.08966	4	1,690.19405	4	1,937.29844	4	2,184.40283	4	2,431.50723
5	210.03873	5	457.14313	5	704.24752	5	951.35191	5	1,198.45631	5	1,445.56070	5	1,692.66509	5	1,939.76949	5	2,186.87388	5	2,433.97827
6	212.50978	6	459.61417	6	706.71856	6	953.82296	6	1,200.92735	6	1,448.03174	6	1,695.13614	6	1,942.24053	6	2,189.34492	6	2,436.44932
7	214.98082	7	462.08521	7	709.18961	7	956.29400	7	1,203.39839	7	1,450.50279	7	1,697.60718	7	1,944.71157	7	2,191.81597	7	2,438.92036
8	217.45187	8	464.55626	8	711.66065	8	958.76504	8	1,205.86944	8	1,452.97383	8	1,700.07822	8	1,947.18262	8	2,194.28701	8	2,441.39140
9	219.92291	9	467.02730	9	714.13170	9	961.23609	9	1,208.34048	9	1,455.44487	9	1,702.54927	9	1,949.65366	9	2,196.75805	9	2,443.86245
90	222.39395	**190**	469.49835	**290**	716.60274	**390**	963.70713	**490**	1,210.81153	**590**	1,457.91592	**690**	1,705.02031	**790**	1,952.12471	**890**	2,199.22910	**990**	2,446.33349
1	224.86500	1	471.96939	1	719.07378	1	966.17818	1	1,213.28257	1	1,460.38696	1	1,707.49136	1	1,954.59575	1	2,201.70014	1	2,448.80454
2	227.33604	2	474.44043	2	721.54483	2	968.64922	2	1,215.75361	2	1,462.85801	2	1,709.96240	2	1,957.06679	2	2,204.17119	2	2,451.27558
3	229.80709	3	476.91148	3	724.01587	3	971.12026	3	1,218.22466	3	1,465.32905	3	1,712.43344	3	1,959.53784	3	2,206.64223	3	2,453.74662
4	232.27813	4	479.38252	4	726.48692	4	973.59131	4	1,220.69570	4	1,467.80009	4	1,714.90449	4	1,962.00888	4	2,209.11327	4	2,456.21767
5	234.74917	5	481.85357	5	728.95796	5	976.06235	5	1,223.16675	5	1,470.27114	5	1,717.37553	5	1,964.47992	5	2,211.58432	5	2,458.68871
6	237.22022	6	484.32461	6	731.42900	6	978.53340	6	1,225.63779	6	1,472.74218	6	1,719.84658	6	1,966.95097	6	2,214.05536	6	2,461.15975
7	239.69126	7	486.79565	7	733.90005	7	981.00444	7	1,228.10883	7	1,475.21323	7	1,722.31762	7	1,969.42201	7	2,216.52641	7	2,463.63080
8	242.16231	8	489.26670	8	736.37109	8	983.47548	8	1,230.57988	8	1,477.68427	8	1,724.78866	8	1,971.89306	8	2,218.99745	8	2,466.10184
9	244.63335	9	491.73774	9	738.84214	9	985.94653	9	1,233.05092	9	1,480.15531	9	1,727.25971	9	1,974.36410	9	2,221.46849	9	2,468.57289

VOLUME—CUBIC YARDS TO CUBIC METERS

[Reduction factor: 1 cubic yard=0.7645594453 cubic meter]

Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters
0		100	76.45594	200	152.91189	300	229.36783	400	305.82378	500	382.27972	600	458.73567	700	535.19161	800	611.64756	900	688.10350
1	0.76456	1	77.22050	1	153.67645	1	230.13239	1	306.58834	1	383.04428	1	459.50023	1	535.95617	1	612.41212	1	688.86806
2	1.52912	2	77.98506	2	154.44101	2	230.89695	2	307.35290	2	383.80884	2	460.26479	2	536.72073	2	613.17668	2	689.63262
3	2.29368	3	78.74962	3	155.20557	3	231.66151	3	308.11746	3	384.57340	3	461.02935	3	537.48529	3	613.94123	3	690.39718
4	3.05824	4	79.51418	4	155.97013	4	232.42607	4	308.88202	4	385.33796	4	461.79390	4	538.24985	4	614.70579	4	691.16174
5	3.82280	5	80.27874	5	156.73469	5	233.19063	5	309.64658	5	386.10252	5	462.55846	5	539.01441	5	615.47035	5	691.92630
6	4.58736	6	81.04330	6	157.49925	6	233.95519	6	310.41113	6	386.86708	6	463.32302	6	539.77897	6	616.23491	6	692.69086
7	5.35192	7	81.80786	7	158.26381	7	234.71975	7	311.17569	7	387.63164	7	464.08758	7	540.54353	7	616.99947	7	693.45542
8	6.11648	8	82.57242	8	159.02836	8	235.48431	8	311.94025	8	388.39620	8	464.85214	8	541.30809	8	617.76403	8	694.21998
9	6.88104	9	83.33698	9	159.79292	9	236.24887	9	312.70481	9	389.16076	9	465.61670	9	542.07265	9	618.52859	9	694.98454
10	7.64559	110	84.10154	210	160.55748	310	237.01343	410	313.46937	510	389.92532	610	466.38126	710	542.83721	810	619.29315	910	695.74910
1	8.41015	1	84.86610	1	161.32204	1	237.77799	1	314.23393	1	390.68988	1	467.14582	1	543.60177	1	620.05771	1	696.51365
2	9.17471	2	85.63066	2	162.08660	2	238.54255	2	314.99849	2	391.45444	2	467.91038	2	544.36633	2	620.82227	2	697.27821
3	9.93927	3	86.39522	3	162.85116	3	239.30711	3	315.76305	3	392.21900	3	468.67494	3	545.13088	3	621.58683	3	698.04277
4	10.70383	4	87.15978	4	163.61572	4	240.07167	4	316.52761	4	392.98355	4	469.43950	4	545.89544	4	622.35139	4	698.80733
5	11.46839	5	87.92434	5	164.38028	5	240.83623	5	317.29217	5	393.74811	5	470.20406	5	546.66000	5	623.11595	5	699.57189
6	12.23295	6	88.68890	6	165.14484	6	241.60078	6	318.05673	6	394.51267	6	470.96862	6	547.42456	6	623.88051	6	700.33645
7	12.99751	7	89.45346	7	165.90940	7	242.36534	7	318.82129	7	395.27723	7	471.73318	7	548.18912	7	624.64507	7	701.10101
8	13.76207	8	90.21801	8	166.67396	8	243.12990	8	319.58585	8	396.04179	8	472.49774	8	548.95368	8	625.40963	8	701.86557
9	14.52663	9	90.98257	9	167.43852	9	243.89446	9	320.35041	9	396.80635	9	473.26230	9	549.71824	9	626.17419	9	702.63013
20	15.29119	120	91.74713	220	168.20308	320	244.65902	420	321.11497	520	397.57091	620	474.02686	720	550.48280	820	626.93875	920	703.39469
1	16.05575	1	92.51169	1	168.96764	1	245.42358	1	321.87953	1	398.33547	1	474.79142	1	551.24736	1	627.70330	1	704.15925
2	16.82031	2	93.27625	2	169.73220	2	246.18814	2	322.64409	2	399.10003	2	475.55597	2	552.01192	2	628.46786	2	704.92381
3	17.58487	3	94.04081	3	170.49676	3	246.95270	3	323.40865	3	399.86459	3	476.32053	3	552.77648	3	629.23242	3	705.68837
4	18.34943	4	94.80537	4	171.26132	4	247.71726	4	324.17320	4	400.62915	4	477.08509	4	553.54104	4	629.99698	4	706.45293
5	19.11399	5	95.56993	5	172.02588	5	248.48182	5	324.93776	5	401.39371	5	477.84965	5	554.30560	5	630.76154	5	707.21749
6	19.87855	6	96.33449	6	172.79043	6	249.24638	6	325.70232	6	402.15827	6	478.61421	6	555.07016	6	631.52610	6	707.98205
7	20.64311	7	97.09905	7	173.55499	7	250.01094	7	326.46688	7	402.92283	7	479.37877	7	555.83472	7	632.29066	7	708.74661
8	21.40766	8	97.86361	8	174.31955	8	250.77550	8	327.23144	8	403.68739	8	480.14333	8	556.59928	8	633.05522	8	709.51117
9	22.17222	9	98.62817	9	175.08411	9	251.54006	9	327.99600	9	404.45195	9	480.90789	9	557.36384	9	633.81978	9	710.27572
30	22.93678	130	99.39273	230	175.84867	330	252.30462	430	328.76056	530	405.21651	630	481.67245	730	558.12840	830	634.58434	930	711.04028
1	23.70134	1	100.15729	1	176.61323	1	253.06918	1	329.52512	1	405.98107	1	482.43701	1	558.89295	1	635.34890	1	711.80484
2	24.46590	2	100.92185	2	177.37779	2	253.83374	2	330.28968	2	406.74562	2	483.20157	2	559.65751	2	636.11346	2	712.56940
3	25.23046	3	101.68641	3	178.14235	3	254.59830	3	331.05424	3	407.51018	3	483.96613	3	560.42207	3	636.87802	3	713.33396
4	25.99502	4	102.45097	4	178.90691	4	255.36285	4	331.81880	4	408.27474	4	484.73069	4	561.18663	4	637.64258	4	714.09852
5	26.75958	5	103.21553	5	179.67147	5	256.12741	5	332.58336	5	409.03930	5	485.49525	5	561.95119	5	638.40714	5	714.86308
6	27.52414	6	103.98008	6	180.43603	6	256.89197	6	333.34792	6	409.80386	6	486.25981	6	562.71575	6	639.17170	6	715.62764
7	28.28870	7	104.74464	7	181.20059	7	257.65653	7	334.11248	7	410.56842	7	487.02437	7	563.48031	7	639.93626	7	716.39220
8	29.05326	8	105.50920	8	181.96515	8	258.42109	8	334.87704	8	411.33298	8	487.78893	8	564.24487	8	640.70082	8	717.15676
9	29.81782	9	106.27376	9	182.72971	9	259.18565	9	335.64160	9	412.09754	9	488.55349	9	565.00943	9	641.46537	9	717.92132
40	30.58238	140	107.03832	240	183.49427	340	259.95021	440	336.40616	540	412.86210	640	489.31804	740	565.77399	840	642.22993	940	718.68588
1	31.34694	1	107.80288	1	184.25883	1	260.71477	1	337.17072	1	413.62666	1	490.08260	1	566.53855	1	642.99449	1	719.45044
2	32.11150	2	108.56744	2	185.02339	2	261.47933	2	337.93527	2	414.39122	2	490.84716	2	567.30311	2	643.75905	2	720.21500
3	32.87606	3	109.33200	3	185.78795	3	262.24389	3	338.69983	3	415.15578	3	491.61172	3	568.06767	3	644.52361	3	720.97956
4	33.64062	4	110.09656	4	186.55250	4	263.00845	4	339.46439	4	415.92034	4	492.37628	4	568.83223	4	645.28817	4	721.74412
5	34.40518	5	110.86112	5	187.31706	5	263.77301	5	340.22895	5	416.68490	5	493.14084	5	569.59679	5	646.05273	5	722.50868
6	35.16973	6	111.62568	6	188.08162	6	264.53757	6	340.99351	6	417.44946	6	493.90540	6	570.36135	6	646.81729	6	723.27324
7	35.93429	7	112.39024	7	188.84618	7	265.30213	7	341.75807	7	418.21402	7	494.66996	7	571.12591	7	647.58185	7	724.03779
8	36.69885	8	113.15480	8	189.61074	8	266.06669	8	342.52263	8	418.97858	8	495.43452	8	571.89047	8	648.34641	8	724.80235
9	37.46341	9	113.91936	9	190.37530	9	266.83125	9	343.28719	9	419.74314	9	496.19908	9	572.65502	9	649.11097	9	725.56691

50	38.22797	**150**	114.68392	**250**	191.13986	**350**	267.59581	**450**	344.05175	**550**	420.50769	**650**	496.96364	**750**	573.41958	**850**	649.87553	**950**	726.33147
1	38.99253	1	115.44848	1	191.90442	1	268.36037	1	344.81631	1	421.27225	1	497.72820	1	574.18414	1	650.64009	1	727.09603
2	39.75709	2	116.21304	2	192.66898	2	269.12492	2	345.58087	2	422.03681	2	498.49276	2	574.94870	2	651.40465	2	727.86059
3	40.52165	3	116.97760	3	193.43354	3	269.88948	3	346.34543	3	422.80137	3	499.25732	3	575.71326	3	652.16921	3	728.62515
4	41.28621	4	117.74215	4	194.19810	4	270.65404	4	347.10999	4	423.56593	4	500.02188	4	576.47782	4	652.93377	4	729.38971
5	42.05077	5	118.50671	5	194.96266	5	271.41860	5	347.87455	5	424.33049	5	500.78644	5	577.24238	5	653.69833	5	730.15427
6	42.81533	6	119.27127	6	195.72722	6	272.18316	6	348.63911	6	425.09505	6	501.55100	6	578.00694	6	654.46289	6	730.91883
7	43.57989	7	120.03583	7	196.49178	7	272.94772	7	349.40367	7	425.85961	7	502.31556	7	578.77150	7	655.22744	7	731.68339
8	44.34445	8	120.80039	8	197.25634	8	273.71228	8	350.16823	8	426.62417	8	503.08012	8	579.53606	8	655.99200	8	732.44795
9	45.10901	9	121.56495	9	198.02090	9	274.47684	9	350.93279	9	427.38873	9	503.84467	9	580.30062	9	656.75656	9	733.21251
60	45.87357	**160**	122.32951	**260**	198.78546	**360**	275.24140	**460**	351.69734	**560**	428.15329	**660**	504.60923	**760**	581.06518	**860**	657.52112	**960**	733.97707
1	46.63813	1	123.09407	1	199.55002	1	276.00596	1	352.46190	1	428.91785	1	505.37379	1	581.82974	1	658.28568	1	734.74163
2	47.40269	2	123.85863	2	200.31457	2	276.77052	2	353.22646	2	429.68241	2	506.13835	2	582.59430	2	659.05024	2	735.50619
3	48.16725	3	124.62319	3	201.07913	3	277.53508	3	353.99102	3	430.44697	3	506.90291	3	583.35886	3	659.81480	3	736.27075
4	48.93180	4	125.38775	4	201.84369	4	278.29964	4	354.75558	4	431.21153	4	507.66747	4	584.12342	4	660.57936	4	737.03531
5	49.69636	5	126.15231	5	202.60825	5	279.06420	5	355.52014	5	431.97609	5	508.43203	5	584.88798	5	661.34392	5	737.79986
6	50.46092	6	126.91687	6	203.37281	6	279.82876	6	356.28470	6	432.74065	6	509.19659	6	585.65254	6	662.10848	6	738.56442
7	51.22548	7	127.68143	7	204.13737	7	280.59332	7	357.04926	7	433.50521	7	509.96115	7	586.41709	7	662.87304	7	739.32898
8	51.99004	8	128.44599	8	204.90193	8	281.35788	8	357.81382	8	434.26976	8	510.72571	8	587.18165	8	663.63760	8	740.09354
9	52.75460	9	129.21055	9	205.66649	9	282.12244	9	358.57838	9	435.03432	9	511.49027	9	587.94621	9	664.40216	9	740.85810
70	53.51916	**170**	129.97511	**270**	206.43105	**370**	282.88699	**470**	359.34294	**570**	435.79888	**670**	512.25483	**770**	588.71077	**870**	665.16672	**970**	741.62266
1	54.28372	1	130.73967	1	207.19561	1	283.65155	1	360.10750	1	436.56344	1	513.01939	1	589.47533	1	665.93128	1	742.38722
2	55.04828	2	131.50422	2	207.96017	2	284.41611	2	360.87206	2	437.32800	2	513.78395	2	590.23989	2	666.69584	2	743.15178
3	55.81284	3	132.26878	3	208.72473	3	285.18067	3	361.63662	3	438.09256	3	514.54851	3	591.00445	3	667.46040	3	743.91634
4	56.57740	4	133.03334	4	209.48929	4	285.94523	4	362.40118	4	438.85712	4	515.31307	4	591.76901	4	668.22496	4	744.68090
5	57.34196	5	133.79790	5	210.25385	5	286.70979	5	363.16574	5	439.62168	5	516.07763	5	592.53357	5	668.98951	5	745.44546
6	58.10652	6	134.56246	6	211.01841	6	287.47435	6	363.93030	6	440.38624	6	516.84219	6	593.29813	6	669.75407	6	746.21002
7	58.87108	7	135.32702	7	211.78297	7	288.23891	7	364.69486	7	441.15080	7	517.60674	7	594.06269	7	670.51863	7	746.97458
8	59.63564	8	136.09158	8	212.54753	8	289.00347	8	365.45941	8	441.91536	8	518.37130	8	594.82725	8	671.28319	8	747.73914
9	60.40020	9	136.85614	9	213.31209	9	289.76803	9	366.22397	9	442.67992	9	519.13586	9	595.59181	9	672.04775	9	748.50370
80	61.16476	**180**	137.62070	**280**	214.07664	**380**	290.53259	**480**	366.98853	**580**	443.44448	**680**	519.90042	**780**	596.35637	**880**	672.81231	**980**	749.26826
1	61.92932	1	138.38526	1	214.84120	1	291.29715	1	367.75309	1	444.20904	1	520.66498	1	597.12093	1	673.57687	1	750.03282
2	62.69387	2	139.14982	2	215.60576	2	292.06171	2	368.51765	2	444.97360	2	521.42954	2	597.88549	2	674.34143	2	750.79738
3	63.45843	3	139.91438	3	216.37032	3	292.82627	3	369.28221	3	445.73816	3	522.19410	3	598.65005	3	675.10599	3	751.56193
4	64.22299	4	140.67894	4	217.13488	4	293.59083	4	370.04677	4	446.50272	4	522.95866	4	599.41461	4	675.87055	4	752.32649
5	64.98755	5	141.44350	5	217.89944	5	594.35539	5	370.81133	5	447.26728	5	523.72322	5	600.17916	5	676.63511	5	753.09105
6	65.75211	6	142.20806	6	218.66400	6	295.11995	6	371.57589	6	448.03183	6	524.48778	6	600.94372	6	677.39967	6	753.85561
7	66.51667	7	142.97262	7	219.42856	7	295.88451	7	372.34045	7	448.79639	7	525.25234	7	601.70828	7	678.16423	7	754.62017
8	67.28123	8	143.73718	8	220.19312	8	296.64906	8	373.10501	8	449.56095	8	526.01690	8	602.47284	8	678.92879	8	755.38473
9	68.04579	9	144.50174	9	220.95768	9	297.41362	9	373.86957	9	450.32551	9	526.78146	9	603.23740	9	679.69335	9	756.14929
90	68.81035	**190**	145.26629	**290**	221.72224	**390**	298.17818	**490**	374.63413	**590**	451.09007	**690**	527.54602	**790**	604.00196	**890**	680.45791	**990**	756.91385
1	69.57491	1	146.03085	1	222.48680	1	298.94274	1	375.39869	1	451.85463	1	528.31058	1	604.76652	1	681.22247	1	757.67841
2	70.33947	2	146.79541	2	223.25136	2	299.70730	2	376.16325	2	452.61919	2	529.07514	2	605.53108	2	681.98703	2	758.44297
3	71.10403	3	147.55997	3	224.01592	3	300.47186	3	376.92781	3	453.38375	3	529.83970	3	606.29564	3	682.75158	3	759.20753
4	71.86859	4	148.32453	4	224.78048	4	301.23642	4	377.69237	4	454.14831	4	530.60426	4	607.06020	4	683.51614	4	759.97209
5	72.63315	5	149.08909	5	225.54504	5	302.00098	5	378.45693	5	454.91287	5	531.36881	5	607.82476	5	684.28070	5	760.73665
6	73.39771	6	149.85365	6	226.30960	6	302.76554	6	379.22148	6	455.67743	6	532.13337	6	608.58932	6	685.04526	6	761.50121
7	74.16227	7	150.61821	7	227.07416	7	303.53010	7	379.98604	7	456.44199	7	532.89793	7	609.35388	7	685.80982	7	762.26577
8	74.92683	8	151.38277	8	227.83871	8	304.29466	8	380.75060	8	457.20655	8	533.66249	8	610.11844	8	686.57438	8	763.03033
9	75.69139	9	152.14733	9	228.60327	9	305.05922	9	381.51516	9	457.97111	9	534.42705	9	610.88300	9	687.33894	9	763.79489

VOLUME—CUBIC METERS TO CUBIC YARDS

[Reduction factor: 1 cubic meter=1.307942772 cubic yards]

Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards	Cubic meters	Cubic yards
0		100	130.79428	200	261.58855	300	392.38283	400	523.17711	500	653.97139	600	784.76566	700	915.55994	800	1,046.35422	900	1,177.14849
1	1.30794	1	132.10222	1	262.89650	1	393.69077	1	524.48505	1	655.27933	1	786.07361	1	916.86788	1	1,047.66216	1	1,178.45644
2	2.61589	2	133.41016	2	264.20444	2	394.99872	2	525.79299	2	656.58727	2	787.38155	2	918.17583	2	1,048.97010	2	1,179.76438
3	3.92383	3	134.71811	3	265.51238	3	396.30666	3	527.10094	3	657.89521	3	788.68949	3	919.48377	3	1,050.27805	3	1,181.07232
4	5.23177	4	136.02605	4	266.82033	4	397.61460	4	528.40888	4	659.20316	4	789.99743	4	920.79171	4	1,051.58599	4	1,182.38027
5	6.53971	5	137.33399	5	268.12827	5	398.92255	5	529.71682	5	660.51110	5	791.30538	5	922.09965	5	1,052.89393	5	1,183.68821
6	7.84766	6	138.64193	6	269.43621	6	400.23049	6	531.02477	6	661.81904	6	792.61332	6	923.40760	6	1,054.20187	6	1,184.99615
7	9.15560	7	139.94988	7	270.74415	7	401.53843	7	532.33271	7	663.12699	7	793.92126	7	924.71554	7	1,055.50982	7	1,186.30409
8	10.46354	8	141.25782	8	272.05210	8	402.84637	8	533.64065	8	664.43493	8	795.22921	8	926.02348	8	1,056.81776	8	1,187.61204
9	11.77148	9	142.56576	9	273.36004	9	404.15432	9	534.94859	9	665.74287	9	796.53715	9	927.33143	9	1,058.12570	9	1,188.91998
10	13.07943	110	143.87370	210	274.66798	310	405.46226	410	536.25654	510	667.05081	610	797.84509	710	928.63937	810	1,059.43365	910	1,190.22792
1	14.38737	1	145.18165	1	275.97592	1	406.77020	1	537.56448	1	668.35876	1	799.15303	1	929.94731	1	1,060.74159	1	1,191.53587
2	15.69531	2	146.48959	2	277.28387	2	408.07814	2	538.87242	2	669.66670	2	800.46098	2	931.25525	2	1,062.04953	2	1,192.84381
3	17.00326	3	147.79753	3	278.59181	3	409.38609	3	540.18036	3	670.97464	3	801.76892	3	932.56320	3	1,063.35747	3	1,194.15175
4	18.31120	4	149.10548	4	279.89975	4	410.69403	4	541.48831	4	672.28258	4	803.07686	4	933.87114	4	1,064.66542	4	1,195.45969
5	19.61914	5	150.41342	5	281.20770	5	412.00197	5	542.79625	5	673.59053	5	804.38480	5	935.17908	5	1,065.97336	5	1,196.76764
6	20.92708	6	151.72136	6	282.51564	6	413.30992	6	544.10419	6	674.89847	6	805.69275	6	936.48702	6	1,067.28130	6	1,198.07558
7	22.23503	7	153.02930	7	283.82358	7	414.61786	7	545.41214	7	676.20641	7	807.00069	7	937.79497	7	1,068.58924	7	1,199.38352
8	23.54297	8	154.33725	8	285.13152	8	415.92580	8	546.72008	8	677.51436	8	808.30863	8	939.10291	8	1,069.89719	8	1,200.69146
9	24.85091	9	155.64519	9	286.43947	9	417.23374	9	548.02802	9	678.82230	9	809.61658	9	940.41085	9	1,071.20513	9	1,201.99941
20	26.15886	120	156.95313	220	287.74741	320	418.54169	420	549.33596	520	680.13024	620	810.92452	720	941.71880	820	1,072.51307	920	1,203.30735
1	27.46680	1	158.26108	1	289.05535	1	419.84963	1	550.64391	1	681.43818	1	812.23246	1	943.02674	1	1,073.82102	1	1,204.61529
2	28.77474	2	159.56902	2	290.36330	2	421.15757	2	551.95185	2	682.74613	2	813.54040	2	944.33468	2	1,075.12896	2	1,205.92324
3	30.08268	3	160.87696	3	291.67124	3	422.46552	3	553.25979	3	684.05407	3	814.84835	3	945.64262	3	1,076.43690	3	1,207.23118
4	31.39063	4	162.18490	4	292.97918	4	423.77346	4	554.56774	4	685.36201	4	816.15629	4	946.95057	4	1,077.74484	4	1,208.53912
5	32.69857	5	163.49285	5	294.28712	5	425.08140	5	555.87568	5	686.66996	5	817.46423	5	948.25851	5	1,079.05279	5	1,209.84706
6	34.00651	6	164.80079	6	295.59507	6	426.38934	6	557.18362	6	687.97790	6	818.77218	6	949.56645	6	1,080.36073	6	1,211.15501
7	35.31445	7	166.10873	7	296.90301	7	427.69729	7	558.49156	7	689.28584	7	820.08012	7	950.87440	7	1,081.66867	7	1,212.46295
8	36.62240	8	167.41667	8	298.21095	8	429.00523	8	559.79951	8	690.59378	8	821.38806	8	952.18234	8	1,082.97662	8	1,213.77089
9	37.93034	9	168.72462	9	299.51889	9	430.31317	9	561.10745	9	691.90173	9	822.69600	9	953.49028	9	1,084.28456	9	1,215.07884
30	39.23828	130	170.03256	230	300.82684	330	431.62111	430	562.41539	530	693.20967	630	824.00395	730	954.79822	830	1,085.59250	930	1,216.38678
1	40.54623	1	171.34050	1	302.13478	1	432.92906	1	563.72333	1	694.51761	1	825.31189	1	956.10617	1	1,086.90044	1	1,217.69472
2	41.85417	2	172.64845	2	303.44272	2	434.23700	2	565.03128	2	695.82555	2	826.61983	2	957.41411	2	1,088.20839	2	1,219.00266
3	43.16211	3	173.95639	3	304.75067	3	435.54494	3	566.33922	3	697.13350	3	827.92777	3	958.72205	3	1,089.51633	3	1,220.31061
4	44.47005	4	175.26433	4	306.05861	4	436.85289	4	567.64716	4	698.44144	4	829.23572	4	960.02999	4	1,090.82427	4	1,221.61855
5	45.77800	5	176.57227	5	307.36655	5	438.16083	5	568.95511	5	699.74938	5	830.54366	5	961.33794	5	1,092.13221	5	1,222.92649
6	47.08594	6	177.88022	6	308.67449	6	439.46877	6	570.26305	6	701.05733	6	831.85160	6	962.64588	6	1,093.44016	6	1,224.23443
7	48.39388	7	179.18816	7	309.98244	7	440.77671	7	571.57099	7	702.36527	7	833.15955	7	963.95382	7	1,094.74810	7	1,225.54238
8	49.70183	8	180.49610	8	311.29038	8	442.08466	8	572.87893	8	703.67321	8	834.46749	8	965.26177	8	1,096.05604	8	1,226.85032
9	51.00977	9	181.80405	9	312.59832	9	443.39260	9	574.18688	9	704.98115	9	835.77543	9	966.56971	9	1,097.36399	9	1,228.15826
40	52.31771	140	183.11199	240	313.90627	340	444.70054	440	575.49482	540	706.28910	640	837.08337	740	967.87765	840	1,098.67193	940	1,229.46621
1	53.62565	1	184.41993	1	315.21421	1	446.00849	1	576.80276	1	707.59704	1	838.39132	1	969.18559	1	1,099,97987	1	1,230.77415
2	54.93360	2	185.72787	2	316.52215	2	447.31643	2	578.11071	2	708.90498	2	839.69926	2	970.49354	2	1,101.28781	2	1,232.08209
3	56.24154	3	187.03582	3	317.83009	3	448.62437	3	579.41865	3	710.21293	3	841.00720	3	971.80148	3	1,102.59576	3	1,233.39003
4	57.54948	4	188.34376	4	319.13804	4	449.93231	4	580.72659	4	711.52087	4	842.31515	4	973.10942	4	1,103.90370	4	1,234.69798
5	58.85742	5	189.65170	5	320.44598	5	451.24026	5	582.03453	5	712.82881	5	843.62309	5	974.41737	5	1,105.21164	5	1,236.00592
6	60.16537	6	190.95964	6	321.75392	6	452.54820	6	583.34248	6	714.13675	6	844.93103	6	975.72531	6	1,106.51959	6	1,237.31386
7	61.47331	7	192.26759	7	323.06186	7	453.85614	7	584.65042	7	715.44470	7	846.23897	7	977.03325	7	1,107.82753	7	1,238.62181
8	62.78125	8	193.57553	8	324.36981	8	455.16408	8	585.95836	8	716.75264	8	847.54692	8	978.34119	8	1,109.13547	8	1,239.92975
9	64.08920	9	194.88347	9	325.67775	9	456.47203	9	587.26630	9	718.06058	9	848.85486	9	979.64914	9	1,110.44341	9	1,241.23769

50	65.39714	**150**	196.19142	**250**	326.98569	**350**	457.77997	**450**	588.57425	**550**	719.36852	**650**	850.16280	**750**	980.95708	**850**	1,111.75136	**950**	1,242.54563
1	66.70508	1	197.49936	1	328.29364	1	459.08791	1	589.88219	1	720.67647	1	851.47074	1	982.26502	1	1,113.05930	1	1,243.85358
2	68.01302	2	198.80730	2	329.60158	2	460.39586	2	591.19013	2	721.98441	2	852.77869	2	983.57296	2	1,114.36724	2	1,245.16152
3	69.32097	3	200.11524	3	330.90952	3	461.70380	3	592.49808	3	723.29235	3	854.08663	3	984.88091	3	1,115.67518	3	1,246.46946
4	70.62891	4	201.42319	4	332.21746	4	463.01174	4	593.80602	4	724.60030	4	855.39457	4	986.18885	4	1,116.98313	4	1,247.77740
5	71.93685	5	202.73113	5	333.52541	5	464.31968	5	595.11396	5	725.90824	5	856.70252	5	987.49679	5	1,118.29107	5	1,249.08535
6	73.24480	6	204.03907	6	334.83335	6	465.62763	6	596.42190	6	727.21618	6	858.01046	6	988.80474	6	1,119.59901	6	1,250.39329
7	74.55274	7	205.34702	7	336.14129	7	466.93557	7	597.72985	7	728.52412	7	859.31840	7	990.11268	7	1,120.90696	7	1,251.70123
8	75.86068	8	206.65496	8	337.44924	8	468.24351	8	599.03779	8	729.83207	8	860.62634	8	991.42062	8	1,122.21490	8	1,253.00918
9	77.16862	9	207.96290	9	338.75718	9	469.55146	9	600.34573	9	731.14001	9	861.93429	9	992.72856	9	1,123.52284	9	1,254.31712
60	78.47657	**160**	209.27084	**260**	340.06512	**360**	470.85940	**460**	601.65368	**560**	732.44795	**660**	863.24223	**760**	994.03651	**860**	1,124.83078	**960**	1,255.62506
1	79.78451	1	210.57879	1	341.37306	1	472.16734	1	602.96162	1	733.75590	1	864.55017	1	995.34445	1	1,126.13873	1	1,256.93300
2	81.09245	2	211.88673	2	342.68101	2	473.47528	2	604.26956	2	735.06384	2	865.85812	2	996.65239	2	1,127.44667	2	1,258.24095
3	82.40039	3	213.19467	3	343.98895	3	474.78323	3	605.57750	3	736.37178	3	867.16606	3	997.96034	3	1,128.75461	3	1,259.54889
4	83.70834	4	214.50261	4	345.29689	4	476.09117	4	606.88545	4	737.67972	4	868.47400	4	999.26828	4	1,130.06256	4	1,260.85683
5	85.01628	5	215.81056	5	346.60483	5	477.39911	5	608.19339	5	738.98767	5	869.78194	5	1,000.57622	5	1,131.37050	5	1,262.16477
6	86.32422	6	217.11850	6	347.91278	6	478.70705	6	609.50133	6	740.29561	6	871.08989	6	1,001.88416	6	1,132.67844	6	1,263.47272
7	87.63217	7	218.42644	7	349.22072	7	480.01500	7	610.80927	7	741.60355	7	872.39783	7	1,003.19211	7	1,133.98638	7	1,264.78066
8	88.94011	8	219.73439	8	350.52866	8	481.32294	8	612.11722	8	742.91149	8	873.70577	8	1,004.50005	8	1,135.29433	8	1,266.08860
9	90.24805	9	221.04233	9	351.83661	9	482.63088	9	613.42516	9	744.21944	9	875.01371	9	1,005.80799	9	1,136.60227	9	1,267.39655
70	91.55599	**170**	222.35027	**270**	353.14455	**370**	483.93883	**470**	614.73310	**570**	745.52738	**670**	876.32166	**770**	1,007.11593	**870**	1,137.91021	**970**	1,268.70449
1	92.86394	1	223.65821	1	354.45249	1	485.24677	1	616.04105	1	746.83532	1	877.62960	1	1,008.42388	1	1,139.21815	1	1,270.01243
2	94.17188	2	224.96616	2	355.76043	2	486.55471	2	617.34899	2	748.14327	2	878.93754	2	1,009.73182	2	1,140.52610	2	1,271.32037
3	95.47982	3	226.27410	3	357.06838	3	487.86265	3	618.65693	3	749.45121	3	880.24549	3	1,011.03976	3	1,141.83404	3	1,272.62832
4	96.78777	4	227.58204	4	358.37632	4	489.17060	4	619.96487	4	750.75915	4	881.55343	4	1,012.34771	4	1,143.14198	4	1,273.93626
5	98.09571	5	228.88999	5	359.68426	5	490.47854	5	621.27282	5	752.06709	5	882.86137	5	1,013.65565	5	1,144.44993	5	1,275.24420
6	99.40365	6	230.19793	6	360.99221	6	491.78648	6	622.58076	6	753.37504	6	884.16931	6	1,014.96359	6	1,145.75787	6	1,276.55215
7	100.71159	7	231.50587	7	362.30015	7	493.09443	7	623.88870	7	754.68298	7	885.47726	7	1,016.27153	7	1,147.06581	7	1,277.86009
8	102.01954	8	232.81381	8	363.60809	8	494.40237	8	625.19665	8	755.99092	8	886.78520	8	1,017.57948	8	1,148.37375	8	1,279.16803
9	103.32748	9	234.12176	9	364.91603	9	495.71031	9	626.50459	9	757.29886	9	888.09314	9	1,018.88742	9	1,149.68170	9	1,280.47597
80	104.63542	**180**	235.42970	**280**	366.22398	**380**	497.01825	**480**	627.81253	**580**	758.60681	**680**	889.40108	**780**	1,020.19536	**880**	1,150.98964	**980**	1,281.78392
1	105.94336	1	236.73764	1	367.53192	1	498.32620	1	629.12047	1	759.91475	1	890.70903	1	1,021.50330	1	1,152.29758	1	1,283.09186
2	107.25131	2	238.04558	2	368.83986	2	499.63414	2	630.42842	2	761.22269	2	892.01697	2	1,022.81125	2	1,153.60552	2	1,284.39980
3	108.55925	3	239.35353	3	370.14780	3	500.94208	3	631.73636	3	762.53064	3	893.32491	3	1,024.11919	3	1,154.91347	3	1,285.70774
4	109.86719	4	240.66147	4	371.45575	4	502.25002	4	633.04430	4	763.83858	4	894.63286	4	1,025.42713	4	1,156.22141	4	1,287.01569
5	111.17514	5	241.96941	5	372.76369	5	503.55797	5	634.35224	5	765.14652	5	895.94080	5	1,026.73508	5	1,157.52935	5	1,288.32363
6	112.48308	6	243.27736	6	374.07163	6	504.86591	6	635.66019	6	766.45446	6	897.24874	6	1,028.04302	6	1,158.83730	6	1,289.63157
7	113.79102	7	244.58530	7	375.37958	7	506.17385	7	636.96813	7	767.76241	7	898.55668	7	1,029.35096	7	1,160.14524	7	1,290.93952
8	115.09896	8	245.89324	8	376.68752	8	507.48180	8	638.27607	8	769.07035	8	899.86463	8	1,030.65890	8	1,161.45318	8	1,292.24746
9	116.40691	9	247.20118	9	377.99546	9	508.78974	9	639.58402	9	770.37829	9	901.17257	9	1,031.96685	9	1,162.76112	9	1,293.55540
90	117.71485	**190**	248.50913	**290**	379.30340	**390**	510.09768	**490**	640.89196	**590**	771.68624	**690**	902.48051	**790**	1,033.27479	**890**	1,164.06907	**990**	1,294.86334
1	119.02279	1	249.81707	1	380.61135	1	511.40562	1	642.19990	1	772.99418	1	903.78846	1	1,034.58273	1	1,165.37701	1	1,296.17129
2	120.33074	2	251.12501	2	381.91929	2	512.71357	2	643.50784	2	774.30212	2	905.09640	2	1,035.89068	2	1,166.68495	2	1,297.47923
3	121.63868	3	252.43295	3	383.22723	3	514.02151	3	644.81579	3	775.61006	3	906.40434	3	1,037.19862	3	1,167.99290	3	1,298.78717
4	122.94662	4	253.74090	4	384.53517	4	515.32945	4	646.12373	4	776.91801	4	907.71228	4	1,038.50656	4	1,169.30084	4	1,300.09512
5	124.25456	5	255.04884	5	385.84312	5	516.63739	5	647.43167	5	778.22595	5	909.02023	5	1,039.81450	5	1,170.60878	5	1,301.40306
6	125.56251	6	256.35678	6	387.15106	6	517.94534	6	648.73961	6	779.53389	6	910.32817	6	1,041.12245	6	1,171.91672	6	1,302.71100
7	126.87045	7	257.66473	7	388.45900	7	519.25328	7	650.04756	7	780.84183	7	911.63611	7	1,042.43039	7	1,173.22467	7	1,304.01894
8	128.17839	8	258.97267	8	389.76695	8	520.56122	8	651.35550	8	782.14978	8	912.94405	8	1,043.73833	8	1,174.53261	8	1,305.32689
9	129.48633	9	260.28061	9	391.07489	9	521.86917	9	652.66344	9	783.45772	9	914.25200	9	1,045.04627	9	1,175.84055	9	1,306.63483

CAPACITY—LIQUID QUARTS TO LITERS

[Reduction factor: 1 liquid quart=0.94633307 liter]

Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters
0		**100**	94.633	**200**	189.267	**300**	283.900	**400**	378.533	**500**	473.167	**600**	567.800	**700**	662.433	**800**	757.066	**900**	851.700
1	0.9463	1	95.580	1	190.213	1	284.846	1	379.480	1	474.113	1	568.746	1	663.379	1	758.013	1	852.646
2	1.8927	2	96.526	2	191.159	2	285.793	2	380.426	2	475.059	2	569.693	2	664.326	2	758.959	2	853.592
3	2.8390	3	97.472	3	192.106	3	286.739	3	381.372	3	476.006	3	570.639	3	665.272	3	759.905	3	854.539
4	3.7853	4	98.419	4	193.052	4	287.685	4	382.319	4	476.952	4	571.585	4	666.218	4	760.852	4	855.485
5	4.7317	5	99.365	5	193.998	5	288.632	5	383.265	5	477.898	5	572.532	5	667.165	5	761.798	5	856.431
6	5.6780	6	100.311	6	194.945	6	289.578	6	384.211	6	478.845	6	573.478	6	668.111	6	762.744	6	857.378
7	6.6243	7	101.258	7	195.891	7	290.524	7	385.158	7	479.791	7	574.424	7	669.057	7	763.691	7	858.324
8	7.5707	8	102.204	8	196.837	8	291.471	8	386.104	8	480.737	8	575.371	8	670.004	8	764.637	8	859.270
9	8.5170	9	103.150	9	197.784	9	292.417	9	387.050	9	481.684	9	576.317	9	670.950	9	765.583	9	860.217
10	9.4633	**110**	104.097	**210**	198.730	**310**	293.363	**410**	387.997	**510**	482.630	**610**	577.263	**710**	671.896	**810**	766.530	**910**	861.163
1	10.4097	1	105.043	1	199.676	1	294.310	1	388.943	1	483.576	1	578.210	1	672.843	1	767.476	1	862.109
2	11.3560	2	105.989	2	200.623	2	295.256	2	389.889	2	484.523	2	579.156	2	673.789	2	768.422	2	863.056
3	12.3023	3	106.936	3	201.569	3	296.202	3	390.836	3	485.469	3	580.102	3	674.735	3	769.369	3	864.002
4	13.2487	4	107.882	4	202.515	4	297.149	4	391.782	4	486.415	4	581.049	4	675.682	4	770.315	4	864.948
5	14.1950	5	108.828	5	203.462	5	298.095	5	392.728	5	487.362	5	581.995	5	676.628	5	771.261	5	865.895
6	15.1413	6	109.775	6	204.408	6	299.041	6	393.675	6	488.308	6	582.941	6	677.574	6	772.208	6	866.841
7	16.0877	7	110.721	7	205.354	7	299.988	7	394.621	7	489.254	7	583.888	7	678.521	7	773.154	7	867.787
8	17.0340	8	111.667	8	206.301	8	300.934	8	395.567	8	490.201	8	584.834	8	679.467	8	774.100	8	868.734
9	17.9803	9	112.614	9	207.247	9	301.880	9	396.514	9	491.147	9	585.780	9	680.413	9	775.047	9	869.680
20	18.9267	**120**	113.560	**220**	208.193	**320**	302.827	**420**	397.460	**520**	492.093	**620**	586.727	**720**	681.360	**820**	775.993	**920**	870.626
1	19.8730	1	114.506	1	209.140	1	303.773	1	398.406	1	493.040	1	587.673	1	682.306	1	776.939	1	871.573
2	20.8193	2	115.453	2	210.086	2	304.719	2	399.353	2	493.986	2	588.619	2	683.252	2	777.886	2	872.519
3	21.7657	3	116.399	3	211.032	3	305.666	3	400.299	3	494.932	3	589.566	3	684.199	3	778.832	3	873.465
4	22.7120	4	117.345	4	211.979	4	306.612	4	401.245	4	495.879	4	590.512	4	685.145	4	779.778	4	874.412
5	23.6583	5	118.292	5	212.925	5	307.558	5	402.192	5	496.825	5	591.458	5	686.091	5	780.725	5	875.358
6	24.6047	6	119.238	6	213.871	6	308.505	6	403.138	6	497.771	6	592.405	6	687.038	6	781.671	6	876.304
7	25.5510	7	120.184	7	214.818	7	309 451	7	404.084	7	498.718	7	593.351	7	687.984	7	782.617	7	877.251
8	26.4973	8	121.131	8	215.764	8	310.397	8	405.031	8	499.664	8	594.297	8	688.930	8	783.564	8	878.197
9	27.4437	9	122.077	9	216.710	9	311.344	9	405.977	9	500.610	9	595.244	9	689.877	9	784.510	9	879.143
30	28.3900	**130**	123.023	**230**	217.657	**330**	312.290	**430**	406.923	**530**	501.557	**630**	596.190	**730**	690.823	**830**	785.456	**930**	880.090
1	29.3363	1	123.970	1	218.603	1	313.236	1	407.870	1	502.503	1	597.136	1	691.769	1	786.403	1	881.036
2	30.2827	2	124.916	2	219.549	2	314.183	2	408.816	2	503.449	2	598.083	2	692.716	2	787.349	2	881.982
3	31.2290	3	125.862	3	220.496	3	315.129	3	409.762	3	504.396	3	599.029	3	693.662	3	788.295	3	882.929
4	32.1753	4	126.809	4	221.442	4	316.075	4	410.709	4	505.342	4	599.975	4	694.608	4	789.242	4	883.875
5	33.1217	5	127.755	5	222.388	5	317.022	5	411.655	5	506.288	5	600.922	5	695.555	5	790.188	5	884.821
6	34.0680	6	128.701	6	223.335	6	317.968	6	412.601	6	507.235	6	601.868	6	696.501	6	791.134	6	885.768
7	35.0143	7	129.648	7	224.281	7	318.914	7	413.548	7	508.181	7	602.814	7	697.447	7	792.081	7	886.714
8	35.9607	8	130.594	8	225.227	8	319.861	8	414.494	8	509.127	8	603.761	8	698.394	8	793.027	8	887.660
9	36.9070	9	131.540	9	226.174	9	320.807	9	415.440	9	510.074	9	604.707	9	699.340	9	793.973	9	888.607
40	37.8533	**140**	132.487	**240**	227.120	**340**	321.753	**440**	416.387	**540**	511.020	**640**	605.653	**740**	700.286	**840**	794.920	**940**	889.553
1	38.7997	1	133.433	1	228.066	1	322.700	1	417.333	1	511.966	1	606.599	1	701.233	1	795.866	1	890.499
2	39.7460	2	134.379	2	229.013	2	323.646	2	418.279	2	512.913	2	607.546	2	702.179	2	796.812	2	891.446
3	40.6923	3	135.326	3	229.959	3	324.592	3	419.226	3	513.859	3	608.492	3	703.125	3	797.759	3	892.392
4	41.6387	4	136.272	4	230.905	4	325.539	4	420.172	4	514.805	4	609.438	4	704.072	4	798.705	4	893.338
5	42.5850	5	137.218	5	231.852	5	326.485	5	421.118	5	515.752	5	610.385	5	705.018	5	799.651	5	894.285
6	43.5313	6	138.165	6	232.798	6	327.431	6	422.065	6	516.698	6	611.331	6	705.964	6	800.598	6	895.231
7	44.4777	7	139.111	7	233.744	7	328.378	7	423.011	7	517.644	7	612.277	7	706.911	7	801.544	7	896.177
8	45.4240	8	140.057	8	234.691	8	329.324	8	423.957	8	518.591	8	613.224	8	707.857	8	802.490	8	897.124
9	46.3703	9	141.004	9	235.637	9	330.270	9	424.904	9	519.537	9	614.170	9	708.803	9	803.437	9	898.070

50	47.3167	**150**	141.950	**250**	236.583	**350**	331.217	**450**	425.850	**550**	520.483	**650**	615.116	**750**	709.750	**850**	804.383	**950**	899.016
1	48.2630	1	142.896	1	237.530	1	332.163	1	426.796	1	521.430	1	616.063	1	710.696	1	805.329	1	899.963
2	49.2093	2	143.843	2	238.476	2	333.109	2	427.743	2	522.376	2	617.009	2	711.642	2	806.276	2	900.909
3	50.1557	3	144.789	3	239.422	3	334.056	3	428.689	3	523.322	3	617.955	3	712.589	3	807.222	3	901.855
4	51.1020	4	145.735	4	240.369	4	335.002	4	429.635	4	524.269	4	618.902	4	713.535	4	808.168	4	902.802
5	52.0483	5	146.682	5	241.315	5	335.948	5	430.582	5	525.215	5	619.848	5	714.481	5	809.115	5	903.748
6	52.9947	6	147.628	6	242.261	6	336.895	6	431.528	6	526.161	6	620.794	6	715.428	6	810.061	6	904.694
7	53.9410	7	148.574	7	243.208	7	337.841	7	432.474	7	527.108	7	621.741	7	716.374	7	811.007	7	905.641
8	54.8873	8	149.521	8	244.154	8	338.787	8	433.421	8	528.054	8	622.687	8	717.320	8	811.954	8	906.587
9	55.8337	9	150.467	9	245.100	9	339.734	9	434.367	9	529.000	9	623.633	9	718.267	9	812.900	9	907.533
60	56.7800	**160**	151.413	**260**	246.047	**360**	340.680	**460**	435.313	**560**	529.947	**660**	624.580	**760**	719.213	**860**	813.846	**960**	908.480
1	57.7263	1	152.360	1	246.993	1	341.626	1	436.260	1	530.893	1	625.526	1	720.159	1	814.793	1	909.426
2	58.6727	2	153.306	2	247.939	2	342.573	2	437.206	2	531.839	2	626.472	2	721.106	2	815.739	2	910.372
3	59.6190	3	154.252	3	248.886	3	343.519	3	438.152	3	532.786	3	627.419	3	722.052	3	816.685	3	911.319
4	60.5653	4	155.199	4	249.832	4	344.465	4	439.099	4	533.732	4	628.365	4	722.998	4	817.632	4	912.265
5	61.5116	5	156.145	5	250.778	5	345.412	5	440.045	5	534.678	5	629.311	5	723.945	5	818.578	5	913.211
6	62.4580	6	157.091	6	251.725	6	346.358	6	440.991	6	535.625	6	630.258	6	724.891	6	819.524	6	914.158
7	63.4043	7	158.038	7	252.671	7	347.304	7	441.938	7	536.571	7	631.204	7	725.837	7	820.471	7	915.104
8	64.3506	8	158.984	8	253.617	8	348.251	8	442.884	8	537.517	8	632.150	8	726.784	8	821.417	8	916.050
9	65.2970	9	159.930	9	254.564	9	349.197	9	443.830	9	538.464	9	633.097	9	727.730	9	822.363	9	916.997
70	66.2433	**170**	160.877	**270**	255.510	**370**	350.143	**470**	444.777	**570**	539.410	**670**	634.043	**770**	728.676	**870**	823.310	**970**	917.943
1	67.1896	1	161.823	1	256.456	1	351.090	1	445.723	1	540.356	1	634.989	1	729.623	1	824.256	1	918.889
2	68.1360	2	162.769	2	257.403	2	352.036	2	446.669	2	541.303	2	635.936	2	730.569	2	825.202	2	919.836
3	69.0823	3	163.716	3	258.349	3	352.982	3	447.616	3	542.249	3	636.882	3	731.515	3	826.149	3	920.782
4	70.0286	4	164.662	4	259.295	4	353.929	4	448.562	4	543.195	4	637.828	4	732.462	4	827.095	4	921.728
5	70.9750	5	165.608	5	260.242	5	354.875	5	449.508	5	544.142	5	638.775	5	733.408	5	828.041	5	922.675
6	71.9213	6	166.555	6	261.188	6	355.821	6	450.455	6	545.088	6	639.721	6	734.354	6	828.988	6	923.621
7	72.8676	7	167.501	7	262.134	7	356.768	7	451.401	7	546.034	7	640.667	7	735.301	7	829.934	7	924.567
8	73.8140	8	168.447	8	263.081	8	357.714	8	452.347	8	546.981	8	641.614	8	736.247	8	830.880	8	925.514
9	74.7603	9	169.394	9	264.027	9	358.660	9	453.294	9	547.927	9	642.560	9	737.193	9	831.827	9	926.460
80	75.7066	**180**	170.340	**280**	264.973	**380**	359.607	**480**	454.240	**580**	548.873	**680**	643.506	**780**	738.140	**880**	832.773	**980**	927.406
1	76.6530	1	171.286	1	265.920	1	360.553	1	455.186	1	549.820	1	644.453	1	739.086	1	833.719	1	928.353
2	77.5993	2	172.233	2	266.866	2	361.499	2	456.133	2	550.766	2	645.399	2	740.032	2	834.666	2	929.299
3	78.5456	3	173.179	3	267.812	3	362.446	3	457.079	3	551.712	3	646.345	3	740.979	3	835.612	3	930.245
4	79.4920	4	174.125	4	268.759	4	363.392	4	458.025	4	552.659	4	647.292	4	741.925	4	836.558	4	931.192
5	80.4383	5	175.072	5	269.705	5	364.338	5	458.972	5	553.605	5	648.238	5	742.871	5	837.505	5	932.138
6	81.3846	6	176.018	6	270.651	6	365.285	6	459.918	6	554.551	6	649.184	6	743.818	6	838.451	6	933.084
7	82.3310	7	176.964	7	271.598	7	366.231	7	460.864	7	555.498	7	650.131	7	744.764	7	839.397	7	934.031
8	83.2773	8	177.911	8	272.544	8	367.177	8	461.811	8	556.444	8	651.077	8	745.710	8	840.344	8	934.977
9	84.2236	9	178.857	9	273.490	9	368.124	9	462.757	9	557.390	9	652.023	9	746.657	9	841.290	9	935.923
90	85.1700	**190**	179.803	**290**	274.437	**390**	369.070	**490**	463.703	**590**	558.337	**690**	652.970	**790**	747.603	**890**	842.236	**990**	936.870
1	86.1163	1	180.750	1	275.383	1	370.016	1	464.650	1	559.283	1	653.916	1	748.549	1	843.183	1	937.816
2	87.0626	2	181.696	2	276.329	2	370.963	2	465.596	2	560.229	2	654.862	2	749.496	2	844.129	2	938.762
3	88.0090	3	182.642	3	277.276	3	371.909	3	466.542	3	561.176	3	655.809	3	750.442	3	845.075	3	939.709
4	88.9553	4	183.589	4	278.222	4	372.855	4	467.489	4	562.122	4	656.755	4	751.388	4	846.022	4	940.655
5	89.9016	5	184.535	5	279.168	5	373.802	5	468.435	5	563.068	5	657.701	5	752.335	5	846.968	5	941.601
6	90.8480	6	185.481	6	280.115	6	374.748	6	469.381	6	564.015	6	658.648	6	753.281	6	847.914	6	942.548
7	91.7943	7	186.428	7	281.061	7	375.694	7	470.328	7	564.961	7	659.594	7	754.227	7	848.861	7	943.494
8	92.7406	8	187.374	8	282.007	8	376.641	8	471.274	8	565.907	8	660.540	8	755.174	8	849.807	8	944.440
9	93.6870	9	188.320	9	282.954	9	377.587	9	472.220	9	566.854	9	661.487	9	756.120	9	850.753	9	945.387

CAPACITY—LITERS TO LIQUID QUARTS

[Reduction factor: 1 liter=1.0567104 quarts]

Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts
0		**100**	105.671	**200**	211.342	**300**	317.013	**400**	422.684	**500**	528.355	**600**	634.026	**700**	739.697	**800**	845.368	**900**	951.039
1	1.0567	1	106.728	1	212.399	1	318.070	1	423.741	1	529.412	1	635.083	1	740.754	1	846.425	1	952.096
2	2.1134	2	107.784	2	213.456	2	319.127	2	424.798	2	530.469	2	636.140	2	741.811	2	847.482	2	953.153
3	3.1701	3	108.841	3	214.512	3	320.183	3	425.854	3	531.525	3	637.196	3	742.867	3	848.538	3	954.209
4	4.2268	4	109.898	4	215.569	4	321.240	4	426.911	4	532.582	4	638.253	4	743.924	4	849.595	4	955.266
5	5.2836	5	110.955	5	216.626	5	322.297	5	427.968	5	533.639	5	639.310	5	744.981	5	850.552	5	956.323
6	6.3403	6	112.011	6	217.682	6	323.353	6	429.024	6	534.695	6	640.367	6	746.038	6	851.709	6	957.380
7	7.3970	7	113.068	7	218.739	7	324.410	7	430.081	7	535.752	7	641.423	7	747.094	7	852.765	7	958.436
8	8.4537	8	114.125	8	219.796	8	325.467	8	431.138	8	536.809	8	642.480	8	748.151	8	853.822	8	959.493
9	9.5104	9	115.181	9	220.852	9	326.524	9	432.195	9	537.866	9	643.537	9	749.208	9	854.879	9	960.550
10	10.5671	**110**	116.238	**210**	221.909	**310**	327.580	**410**	433.251	**510**	538.922	**610**	644.593	**710**	750.264	**810**	855.935	**910**	961.606
1	11.6238	1	117.295	1	222.966	1	328.637	1	434.308	1	539.979	1	645.650	1	751.321	1	856.992	1	962.663
2	12.6805	2	118.352	2	224.023	2	329.694	2	435.365	2	541.036	2	646.707	2	752.378	2	858.049	2	963.720
3	13.7372	3	119.408	3	225.079	3	330.750	3	736.421	3	542.092	3	647.763	3	753.435	3	859.106	3	964.777
4	14.7939	4	120.465	4	226.136	4	331.807	4	437.478	4	543.149	4	648.820	4	754.491	4	860.162	4	965.833
5	15.8507	5	121.522	5	227.193	5	332 864	5	438.535	5	544.206	5	649.877	5	755.548	5	861.219	5	966.890
6	16.9074	6	122.578	6	228.249	6	333.920	6	439.592	6	545.263	6	650.934	6	756.605	6	862.276	6	967.947
7	17.9641	7	123.635	7	229.306	7	334.977	7	440.648	7	546.319	7	651.990	7	757.661	7	863.332	7	969.003
8	19.0208	8	124.692	8	230.363	8	336.034	8	441.705	8	547.376	8	653.047	8	758.718	8	864.389	8	970.060
9	20.0775	9	125.749	9	231.420	9	337.091	9	442.762	9	548.433	9	654.104	9	759.775	9	865.446	9	971.117
20	21.1342	**120**	126.805	**220**	232.476	**320**	338.147	**420**	443.818	**520**	549.489	**620**	655.160	**720**	760.831	**820**	866.503	**920**	972.174
1	22.1909	1	127.862	1	233.533	1	339.204	1	444.875	1	550.546	1	656.217	1	761.888	1	867 559	1	973.230
2	23.2476	2	128.919	2	234.590	2	340.261	2	445.932	2	551.603	2	657.274	2	762.945	2	868.616	2	974.287
3	24.3043	3	129.975	3	235.646	3	341.317	3	446.988	3	552.660	3	658.331	3	764.002	3	869.673	3	975.344
4	25.3610	4	131.032	4	236.703	4	342.374	4	448.045	4	553.716	4	659.387	4	765.058	4	870.729	4	976.400
5	26.4178	5	132.089	5	237.760	5	343.431	5	449.102	5	554.773	5	660.444	5	766.115	5	871.786	5	977.457
6	27.4745	6	133.146	6	238.817	6	344.488	6	450.159	6	555.830	6	661.501	6	767.172	6	872.843	6	978.514
7	28.5312	7	134.202	7	239.873	7	345.544	7	451.215	7	556.886	7	662.557	7	768.228	7	873.900	7	979.571
8	29.5879	8	135.259	8	240.930	8	346.601	8	452.272	8	557.943	8	663.614	8	769.285	8	874.956	8	980.627
9	30.6446	9	136.316	9	241.987	9	347.658	9	453.329	9	559.000	9	664.671	9	770.342	9	876.013	9	981.684
30	31.7013	**130**	137.372	**230**	243.043	**330**	348.714	**430**	454.385	**530**	560.057	**630**	665.728	**730**	771.399	**830**	877.070	**930**	982.741
1	32.7580	1	138.429	1	244.100	1	349.771	1	455.442	1	561.113	1	666.784	1	772.455	1	878.126	1	983.797
2	33.8147	2	139.486	2	245.157	2	350.828	2	456.499	2	562.170	2	667.841	2	773.512	2	879.183	2	984.854
3	34.8714	3	140.542	3	246.214	3	351.885	3	457.556	3	563.227	3	668.898	3	774.569	3	880.240	3	985.911
4	35.9282	4	141.599	4	247.270	4	352.941	4	458.612	4	564.283	4	669.954	4	775.625	4	881.296	4	986.968
5	36.9849	5	142.656	5	248.327	5	353.998	5	459.669	5	565.340	5	671.011	5	776.682	5	882.353	5	988.024
6	38.0416	6	143.713	6	249.384	6	355.055	6	460.726	6	566.397	6	672.068	6	777.739	6	883.410	6	989.081
7	39.0983	7	144.769	7	250.440	7	356.111	7	461.782	7	567.453	7	673.125	7	778.796	7	884.467	7	990.138
8	40.1550	8	145.826	8	251.497	8	357.168	8	462.839	8	568.510	8	674.181	8	779.852	8	885.523	8	991.194
9	41.2117	9	146.883	9	252.554	9	358.225	9	463.896	9	569.567	9	675.238	9	780.909	9	886.580	9	992.251
40	42.2684	**140**	147.939	**240**	253.610	**340**	359.282	**440**	464.953	**540**	570.624	**640**	676.295	**740**	781.966	**840**	887.637	**940**	993.308
1	43.3251	1	148.996	1	254.667	1	360.338	1	466.009	1	571.680	1	677.351	1	783.022	1	888.693	1	994.364
2	44.3818	2	150.053	2	255.724	2	361.395	2	467.066	2	572.737	2	678.408	2	784.079	2	889.750	2	995.421
3	45.4385	3	151.110	3	256.781	3	362.452	3	468.123	3	573.794	3	679.465	3	785.136	3	890.807	3	996.478
4	46.4953	4	152.166	4	257.837	4	363.508	4	469.179	4	574.850	4	680.521	4	786.193	4	891.864	4	997.535
5	47.5520	5	153.223	5	258.894	5	364.565	5	470.236	5	575.907	5	681.578	5	787.249	5	892.920	5	998.591
6	48.6087	6	154.280	6	259.951	6	365.622	6	471.293	6	576.964	6	682.635	6	788.306	6	893.977	6	999.648
7	49.6654	7	155.336	7	261.007	7	366.679	7	472.350	7	578.021	7	683.692	7	789.363	7	895.034	7	1,000.705
8	50.7221	8	156.393	8	262.064	8	367.735	8	473.406	8	579.077	8	684.748	8	790.419	8	896.090	8	1,001.761
9	51.7788	9	157.450	9	263.121	9	368.792	9	474.463	9	580.134	9	685.805	9	791.476	9	897.147	9	1,002.818

50	52.8355	**150**	158.507	**250**	264.178	**350**	369.849	**450**	475.520	**550**	581.191	**650**	686.862	**750**	792.533	**850**	898.204	**950**	1,003.875
1	53.8922	1	159.563	1	265.234	1	370.905	1	476.576	1	582.247	1	687.918	1	793.590	1	899.261	1	1,004.932
2	54.9489	2	160.620	2	266.291	2	371.962	2	477.633	2	583.304	2	688.975	2	794.646	2	900.317	2	1,005.988
3	56.0057	3	161.677	3	267.348	3	373.019	3	478.690	3	584.361	3	690.032	3	795.703	3	901.374	3	1,007.045
4	57.0624	4	162.733	4	268.404	4	374.075	4	479.747	4	585.418	4	691.089	4	796.760	4	902.431	4	1,008.102
5	58.1191	5	163.790	5	269.461	5	375.132	5	480.803	5	586.474	5	692.145	5	797.816	5	903.487	5	1,009.158
6	59.1758	6	164.847	6	270.518	6	376.189	6	481.860	6	587.531	6	693.202	6	798.873	6	904.544	6	1,010.215
7	60.2325	7	165.904	7	271.575	7	377.246	7	482.917	7	588.588	7	694.259	7	799.930	7	905.601	7	1,011.272
8	61.2892	8	166.960	8	272.631	8	378.302	8	483.973	8	589.644	8	695.315	8	800.986	8	906.658	8	1,012.329
9	62.3459	9	168.017	9	273.688	9	379.359	9	485.030	9	590.701	9	696.372	9	802.043	9	907.714	9	1,013.385
60	63.4026	**160**	169.074	**260**	274.745	**360**	380.416	**460**	486.087	**560**	591.758	**660**	697.429	**760**	803.100	**860**	908.771	**960**	1,014.442
1	64.4593	1	170.130	1	275.801	1	381.472	1	487.143	1	592.815	1	698.486	1	804.157	1	909.828	1	1,015.499
2	65.5160	2	171.187	2	276.858	2	382.529	2	488.200	2	593.871	2	699.542	2	805.213	2	910.884	2	1,016.555
3	66.5728	3	172.244	3	277.915	3	383.586	3	489.257	3	594.928	3	700.599	3	806.270	3	911.941	3	1,017.612
4	67.6295	4	173.301	4	278.972	4	384.643	4	490.314	4	595.985	4	701.656	4	807.327	4	912.998	4	1,018.669
5	68.6862	5	174.357	5	280.028	5	385.699	5	491.370	5	597.041	5	702.712	5	808.383	5	914.054	5	1,019.726
6	69.7429	6	175.414	6	281.085	6	386.756	6	492.427	6	598.098	6	703.769	6	809.440	6	915.111	6	1,020.782
7	70.7996	7	176.471	7	282.142	7	387.813	7	493.484	7	599.155	7	704.826	7	810.497	7	916.168	7	1,021.839
8	71.8563	8	177.527	8	283.198	8	388.869	8	494.540	8	600.212	8	705.883	8	811.554	8	917.225	8	1,022.896
9	72.9130	9	178.584	9	284.255	9	389.926	9	495.597	9	601.268	9	706.939	9	812.610	9	918.281	9	1,023.952
70	73.9697	**170**	179.641	**270**	285.312	**370**	390.983	**470**	496.654	**570**	602.325	**670**	707.996	**770**	813.667	**870**	919.338	**970**	1,025.009
1	75.0264	1	180.697	1	286.369	1	392.040	1	497.711	1	603.382	1	709.053	1	814.724	1	920.395	1	1,026.066
2	76.0831	2	181.754	2	287.425	2	393.096	2	498.767	2	604.438	2	710.109	2	815.780	2	921.451	2	1,027.123
3	77.1399	3	182.811	3	288.482	3	394.153	3	499.824	3	605.495	3	711.166	3	816.837	3	922.508	3	1,028.179
4	78.1966	4	183.868	4	289.539	4	395.210	4	500.881	4	606.552	4	712.223	4	817.894	4	923.565	4	1,029.236
5	79.2533	5	184.924	5	290.595	5	396.266	5	501.937	5	607.608	5	713.280	5	818.951	5	924.622	5	1,030.293
6	80.3100	6	185.981	6	291.652	6	397.323	6	502.994	6	608.665	6	714.336	6	820.007	6	925.678	6	1,031.349
7	81.3667	7	187.038	7	292.709	7	398.380	7	504.051	7	609.722	7	715.393	7	821.064	7	926.735	7	1,032.406
8	82.4234	8	188.094	8	293.765	8	399.437	8	505.108	8	610.779	8	716.450	8	822.121	8	927.792	8	1,033.463
9	83.4801	9	189.151	9	294.822	9	400.493	9	506.164	9	611.835	9	717.506	9	823.177	9	928.848	9	1,034.519
80	84.5368	**180**	190.208	**280**	295.879	**380**	401.550	**480**	507.221	**580**	612 892	**680**	718.563	**780**	824.234	**880**	929.905	**980**	1,035.576
1	85.5935	1	191.265	1	296.936	1	402.607	1	508.278	1	613.949	1	719.620	1	825.291	1	930.962	1	1,036.633
2	86.6503	2	192.321	2	297.992	2	403.663	2	509.334	2	615.005	2	720.676	2	826.348	2	932.019	2	1,037.690
3	87.7070	3	193.378	3	299.049	3	404.720	3	510.391	3	616.062	3	721.733	3	827.404	3	933.075	3	1,038.746
4	88.7637	4	194.435	4	300.106	4	405.777	4	511.448	4	617.119	4	722.790	4	828.461	4	934.132	4	1,039.803
5	89.8204	5	195.491	5	301.162	5	406.834	5	512.505	5	618.176	5	723.847	5	829.518	5	935.189	5	1,040.860
6	90.8771	6	196.548	6	302.219	6	407.890	6	513.561	6	619.232	6	724.903	6	830.574	6	936.245	6	1,041.916
7	91.9338	7	197.605	7	303.276	7	408.947	7	514.618	7	620.289	7	725.960	7	831.631	7	937.302	7	1,042.973
8	92.9905	8	198.662	8	304.333	8	410.004	8	515.675	8	621.346	8	727.017	8	832.688	8	938.359	8	1,044.030
9	94.0472	9	199.718	9	305.389	9	411.060	9	516.731	9	622.402	9	728.073	9	833.745	9	939.416	9	1,045.087
90	95.1039	**190**	200.775	**290**	306.446	**390**	412.117	**490**	517.788	**590**	623.459	**690**	729.130	**790**	834.801	**890**	940.472	**990**	1,046.143
1	96.1606	1	201.832	1	307.503	1	413.174	1	518.845	1	624.516	1	730.187	1	835.858	1	941.529	1	1,047.200
2	97.2174	2	202.888	2	308.559	2	414.230	2	519.902	2	625.573	2	731.244	2	836.915	2	942.586	2	1,048.257
3	98.2741	3	203.945	3	309.616	3	415.287	3	520.958	3	626.629	3	732.300	3	837.971	3	943.642	3	1,049.313
4	99.3308	4	205.002	4	310.673	4	416.344	4	522.015	4	627.686	4	733.357	4	839.028	4	944.699	4	1,050.370
5	100.3875	5	206.059	5	311.730	5	417.401	5	523.072	5	628.743	5	734.414	5	840.085	5	945.756	5	1,051.427
6	101.4442	6	207.115	6	312.786	6	418.457	6	524.128	6	629.799	6	735.470	6	841.141	6	946.813	6	1,052.484
7	102.5009	7	208.172	7	313.843	7	419.514	7	525.185	7	630.856	7	736.527	7	842.198	7	947.869	7	1,053.540
8	103.5576	8	209.229	8	314.900	8	420.571	8	526.242	8	631.913	8	737.584	8	843.255	8	948.926	8	1,054.597
9	104.6143	9	210.285	9	315.956	9	421.627	9	527.298	9	632.970	9	738.641	9	844.312	9	949.983	9	1,055.654

CAPACITY—GALLONS TO LITERS

[Reduction factor: 1 gallon=3.7853323 liters]

Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters
0		**100**	378.533	**200**	757.066	**300**	1,135.600	**400**	1,514.133	**500**	1,892.666	**600**	2,271.199	**700**	2,649.733	**800**	3,028.266	**900**	3,406.799
1	3.7853	1	382.319	1	760.852	1	1,139.385	1	1,517.918	1	1,896.451	1	2,274.985	1	2,653.518	1	3,032.051	1	3,410.584
2	7.5707	2	386.104	2	764.637	2	1,143.170	2	1,521.704	2	1,900.237	2	2,278.770	2	2,657.303	2	3,035.837	2	3,414.370
3	11.3560	3	389.889	3	768.422	3	1,146.956	3	1,525.489	3	1,904.022	3	2,282.555	3	2,661.089	3	3,039.622	3	3,418.155
4	15.1413	4	393.675	4	772.208	4	1,150.741	4	1,529.274	4	1,907.807	4	2,286.341	4	2,664.874	4	3,043.407	4	3,421.940
5	18.9267	5	397.460	5	775.993	5	1,154.526	5	1,533.060	5	1,911.593	5	2,290.126	5	2,668.659	5	3,047.193	5	3,425.726
6	22.7120	6	401.245	6	779.778	6	1,158.312	6	1,536.845	6	1,915.378	6	2,293.911	6	2,672.445	6	3,050.978	6	3,429.511
7	26.4973	7	405.031	7	783.564	7	1,162.097	7	1,540.630	7	1,919.163	7	2,297.697	7	2,676.230	7	3,054.763	7	3,433.296
8	30.2827	8	408.816	8	787.249	8	1,165.882	8	1,544.416	8	1,922.949	8	2,301.482	8	2,680.015	8	3,058.548	8	3,437.082
9	34.0680	9	412.601	9	791.134	9	1,169.668	9	1,548.201	9	1,926.734	9	2,305.267	9	2,683.801	9	3,062.334	9	3,440.867
10	37.8533	**110**	416.387	**210**	794.920	**310**	1,173.453	**410**	1,551.986	**510**	1,930.519	**610**	2,309.053	**710**	2,687.586	**810**	3,066.119	**910**	3,444.652
1	41.6387	1	420.172	1	798.705	1	1,177.238	1	1,555.772	1	1,934.305	1	2,312.838	1	2,691.371	1	3,069.904	1	3,448.438
2	45.4240	2	423.957	2	802.490	2	1,181.024	2	1,559.557	2	1,938.090	2	2,316.623	2	2,695.157	2	3,073.690	2	3,452.223
3	49.2093	3	427.743	3	806.276	3	1,184.809	3	1,563.342	3	1,941.875	3	2,320.409	3	2,698.942	3	3,077.475	3	3,456.008
4	52.9947	4	431.528	4	810.061	4	1,188.594	4	1,567.128	4	1,945.661	4	2,324.194	4	2,702.727	4	3,081.260	4	3,459.794
5	56.7800	5	435.313	5	813.846	5	1,192.380	5	1,570.913	5	1,949.446	5	2,327.979	5	2,706.513	5	3,085.046	5	3,463.579
6	60.5653	6	439.099	6	817.632	6	1,196.165	6	1,574.698	6	1,953.231	6	2,231.765	6	2,710.298	6	3,088.831	6	3,467.364
7	64.3506	7	442.884	7	821.417	7	1,199.950	7	1,578.484	7	1,957.017	7	2,335.550	7	2,714.083	7	3,092.616	7	3,471.150
8	68.1360	8	446.669	8	825.202	8	1,203.736	8	1,582.269	8	1,960.802	8	2,339.335	8	2,717.869	8	3,096.402	8	3,474.935
9	71.9213	9	450.455	9	828.988	9	1,207.521	9	1,586.054	9	1,964.587	9	2,343.121	9	2,721.654	9	3,100.187	9	3,478.720
20	75.7066	**120**	454.240	**220**	832.773	**320**	1,211.306	**420**	1,589.840	**520**	1,968.373	**620**	2,346.906	**720**	2,725.439	**820**	3,103.972	**920**	3,482.506
1	79.4920	1	458.025	1	836.558	1	1,215.092	1	1,593.625	1	1,972.158	1	2,350.691	1	2,729.225	1	3,107.758	1	3,486.291
2	83.2773	2	461.811	2	840.344	2	1,218.877	2	1,597.410	2	1,975.943	2	2,354.477	2	2,733.010	2	3,111.543	2	3,490.076
3	87.0626	3	465.596	3	844.129	3	1,222.662	3	1,601.196	3	1,979.729	3	2,358.262	3	2,736.795	3	3,115.328	3	3,493.862
4	90.8480	4	469.381	4	847.914	4	1,226.448	4	1,604.981	4	1,983.514	4	2,362.047	4	2,740.581	4	3,119.114	4	3,497.647
5	94.6333	5	473.167	5	851.700	5	1,230.233	5	1,608.766	5	1,987.299	5	2,365.833	5	2,744.366	5	3,122.899	5	3,501.432
6	98.4186	6	476.952	6	855.485	6	1,234.018	6	1,612.552	6	1,991.085	6	2,369.618	6	2,748.151	6	3,126.684	6	3,505.218
7	102.2040	7	480.737	7	859.270	7	1,237.804	7	1,616.337	7	1,994.870	7	2,373.403	7	2,751.937	7	3,130.470	7	3,509.003
8	105.9893	8	484.523	8	863.056	8	1,241.589	8	1,620.122	8	1,998.655	8	2,377.189	8	2,755.722	8	3,134.255	8	3,512.788
9	109.7746	9	488.308	9	866.841	9	1,245.374	9	1,623.908	9	2,002.441	9	2,380.974	9	2,759.507	9	3,138.040	9	3,516.574
30	113.5600	**130**	492.093	**230**	870.626	**330**	1,249.160	**430**	1,627.693	**530**	2,006.226	**630**	2,384.759	**730**	2,763.293	**830**	3,141.826	**930**	3,520.359
1	117.3453	1	495.879	1	874.412	1	1,252.945	1	1,631.478	1	2,010.011	1	2,388.545	1	2,767.078	1	3,145.611	1	3,524.144
2	121.1306	2	499.664	2	878.197	2	1,256.730	2	1,635.264	2	2,013.797	2	2,392.330	2	2,770.863	2	3,149.396	2	3,527.930
3	124.9160	3	503.449	3	881.982	3	1,260.516	3	1,639.049	3	2,017.582	3	2,396.115	3	2,774.649	3	3,153.182	3	3,531.715
4	128.7013	4	507.235	4	885.768	4	1,264.301	4	1,642.834	4	2,021.367	4	2,399.901	4	2,778.434	4	3,156.967	4	3,535.500
5	132.4866	5	511.020	5	889.553	5	1,268.086	5	1,646.620	5	2,025.153	5	2,403.686	5	2,782.219	5	3,160.752	5	3,539.286
6	136.2720	6	514.805	6	893.338	6	1,271.872	6	1,650.405	6	2,028.938	6	2,407.471	6	2,786.005	6	3,164.538	6	3,543.071
7	140.0573	7	518.591	7	897.124	7	1,275.657	7	1,654.190	7	2,032.723	7	2,411.257	7	2,789.790	7	3,168.323	7	3,546.856
8	143.8426	8	522.376	8	900.909	8	1,279.442	8	1,657.976	8	2,036.509	8	2,415.042	8	2,793.575	8	3,172.108	8	3,550.642
9	147.6280	9	526.161	9	904.694	9	1,283.228	9	1,661.761	9	2,040.294	9	2,418.827	9	2,797.361	9	3,175.894	9	3,554.427
40	151.4133	**140**	529.947	**240**	908.480	**340**	1,287.013	**440**	1,665.546	**540**	2,044.079	**640**	2,422.613	**740**	2,801.146	**840**	3,179.679	**940**	3,558.212
1	155.1986	1	533.732	1	912.265	1	1,290.798	1	1,669.332	1	2,047.865	1	2,426.398	1	2,804.931	1	3,183.464	1	3,561.998
2	158.9840	2	537.517	2	916.050	2	1,294.584	2	1,673.117	2	2,051.650	2	2,430.183	2	2,808.717	2	3,187.250	2	3,565.783
3	162.7693	3	541.303	3	919.836	3	1,298.369	3	1,676.902	3	2,055.435	3	2,433.969	3	2,812.502	3	3,191.035	3	3,569.568
4	166.5546	4	545.088	4	923.621	4	1,302.154	4	1,680.688	4	2,059.221	4	2,437.754	4	2,816.287	4	3,194.820	4	3,573.354
5	170.3400	5	548.873	5	927.406	5	1,305.940	5	1,684.473	5	2,063.006	5	2,441.539	5	2,820.073	5	3,198.606	5	3,577.139
6	174.1253	6	552.659	6	931.192	6	1,309.725	6	1,688.258	6	2,066.791	6	2,445.325	6	2,823.858	6	3,202.391	6	3,580.924
7	177.9106	7	556.444	7	934.977	7	1,313.510	7	1,692.044	7	2,070.577	7	2,449.110	7	2,827.643	7	3,206.176	7	3,584.710
8	181.6960	8	560.229	8	938.762	8	1,317.296	8	1,695.829	8	2,074.362	8	2,452.895	8	2,831.429	8	3,209.962	8	3,588.495
9	185.4813	9	564.015	9	942.548	9	1,321.081	9	1,699.614	9	2,078.147	9	2,456.681	9	2,835.214	9	3,213.747	9	3,592.280

50	189.2666	**150**	567.800	**250**	946.333	**350**	1,324.866	**450**	1,703.400	**550**	2,081.933	**650**	2,460.466	**750**	2,838.999	**850**	3,217.532	**950**	3,596.066
1	193.0519	1	571.585	1	950.118	1	1,328.652	1	1,707.185	1	2,085.718	1	2,464.251	1	2,842.785	1	3,221.318	1	3,599.851
2	196.8373	2	575.371	2	953.904	2	1,332.437	2	1,710.970	2	2,089.503	2	2,468.037	2	2,846.570	2	3,225.103	2	3,603.636
3	200.6226	3	579.156	3	957.689	3	1,336.222	3	1,714.756	3	2,093.289	3	2,471.822	3	2,850.355	3	3,228.888	3	3,607.422
4	204.4079	4	582.941	4	961.474	4	1,340.008	4	1,718.541	4	2,097.074	4	2,475.607	4	2,854.141	4	3,232.674	4	3,611.207
5	208.1933	5	586.727	5	965.260	5	1,343.793	5	1,722.326	5	2,100.859	5	2,479.393	5	2,857.926	5	3,236.459	5	3,614.992
6	211.9786	6	590.512	6	969.045	6	1,347.578	6	1,726.112	6	2,104.645	6	2,483.178	6	2,861.711	6	3,240.244	6	3,618.778
7	215.7639	7	594.297	7	972.830	7	1,351.364	7	1,729.897	7	2,108.430	7	2,486.963	7	2,865.497	7	3,244.030	7	3,622.563
8	219.5493	8	598.083	8	976.616	8	1,355.149	8	1,733.682	8	2,112.215	8	2,490.749	8	2,869.282	8	3,247.815	8	3,626.348
9	223.3346	9	601.868	9	980.401	9	1,358.934	9	1,737.468	9	2,116.001	9	2,494.534	9	2,873.067	9	3,251.600	9	3,630.134
60	227.1199	**160**	605.653	**260**	984.186	**360**	1,362.720	**460**	1,741.253	**560**	2,119.786	**660**	2,498.319	**760**	2,876.853	**860**	3,255.386	**960**	3,633.919
1	230.9053	1	609.438	1	987.972	1	1,366.525	1	1,745.038	1	2,123.571	1	2,502.105	1	2,880.638	1	3,259.171	1	3,637.704
2	234.6906	2	613.224	2	991.757	2	1,370.290	2	1,748.824	2	2,127.357	2	2,505.890	2	2,884.423	2	3,262.956	2	3,641.490
3	238.4759	3	617.009	3	995.542	3	1,374.076	3	1,752.609	3	2,131.142	3	2,509.675	3	2,888.209	3	3,266.742	3	3,645.275
4	242.2613	4	620.794	4	999.328	4	1,377.861	4	1,756.394	4	2,134.927	4	2,513.461	4	2,891.994	4	3,270.527	4	3,649.060
5	246.0466	5	624.580	5	1,003.113	5	1,381.646	5	1,760.180	5	2,138.713	5	2,517.246	5	2,895.779	5	3,274.312	5	3,652.846
6	249.8319	6	628.365	6	1,006.898	6	1,385.432	6	1,763.965	6	2,142.498	6	2,521.031	6	2,899.565	6	3,278.098	6	3,656.631
7	253.6173	7	632.150	7	1,010.684	7	1,389.217	7	1,767.750	7	2,146.283	7	2,524.817	7	2,903.350	7	3,281.883	7	3,660.416
8	257.4026	8	635.936	8	1,014.469	8	1,393.002	8	1,771.536	8	2,150.069	8	2,528.602	8	2,907.135	8	3,285.668	8	3,664.202
9	261.1879	9	639.721	9	1,018.254	9	1,396.788	9	1,775.321	9	2,153.854	9	2,532.387	9	2,910.921	9	3,289.454	9	3,667.987
70	264.9733	**170**	643.506	**270**	1,022.040	**370**	1,400.573	**470**	1,779.106	**570**	2,157.639	**670**	2,536.173	**770**	2,914.706	**870**	3,293.239	**970**	3,671.772
1	268.7586	1	647.292	1	1,025.825	1	1,404.358	1	1,782.892	1	2,161.425	1	2,539.958	1	2,918.491	1	3,297.024	1	3,675.558
2	272.5439	2	651.077	2	1,029.610	2	1,408.144	2	1,786.677	2	2,165.210	2	2,543.743	2	2,922.277	2	3,300.810	2	3,679.343
3	276.3293	3	654.862	3	1,033.396	3	1,411.929	3	1,790.462	3	2,168.995	3	2,547.529	3	2,926.062	3	3,304.595	3	3,683.128
4	280.1146	4	658.648	4	1,037.181	4	1,415.714	4	1,794.248	4	2,172.781	4	2,551.314	4	2,929.847	4	3,308.380	4	3,686.914
5	283.8999	5	662.433	5	1,040.966	5	1,419.500	5	1,798.033	5	2,176.566	5	2,555.099	5	2,933.633	5	3,312.166	5	3,690.699
6	287.6853	6	666.218	6	1,044.752	6	1,423.285	6	1,801.818	6	2,180.351	6	2,558.885	6	2,937.418	6	3,315.951	6	3,694.484
7	291.4706	7	670.004	7	1,048.537	7	1,427.070	7	1,805.604	7	2,184.137	7	2,562.670	7	2,941.203	7	3,319.736	7	3,698.270
8	295.2559	8	673.789	8	1,052.322	8	1,430.856	8	1,809.389	8	2,187.922	8	2,566.455	8	2,944.989	8	3,323.522	8	3,702.055
9	299.0413	9	677.574	9	1,056.108	9	1,434.641	9	1,813.174	9	2,191.707	9	2,570.241	9	2,948.774	9	3,327.307	9	3,705.840
80	302.8266	**180**	681.360	**280**	1,059.893	**380**	1,438.426	**480**	1,816.960	**580**	2,195.493	**680**	2,574.026	**780**	2,952.559	**880**	3,331.092	**980**	3,709.626
1	306.6119	1	685.145	1	1,063.678	1	1,442.212	1	1,820.745	1	2,199.278	1	2,577.811	1	2,956.345	1	3,334.878	1	3,713.411
2	310.3972	2	688.930	2	1,067.464	2	1,445.997	2	1,824.530	2	2,203.063	2	2,581.597	2	2,960.130	2	3,338.663	2	3,717.196
3	314.1826	3	692.716	3	1,071.249	3	1,449.782	3	1,828.316	3	2,206.849	3	2,585.382	3	2,963.915	3	3,342.448	3	3,720.982
4	317.9679	4	696.501	4	1,075.034	4	1,453.568	4	1,832.101	4	2,210.634	4	2,589.167	4	2,967.701	4	3,346.234	4	3,724.767
5	321.7532	5	700.286	5	1,078.820	5	1,457.353	5	1,835.886	5	2,214.419	5	2,592.953	5	2,971.486	5	3,350.019	5	3,728.552
6	325.5386	6	704.072	6	1,082.605	6	1,461.138	6	1,839.671	6	2,218.205	6	2,596.738	6	2,975.271	6	3,353.804	6	3,732.338
7	329.3239	7	707.857	7	1,086.390	7	1,464.924	7	1,843.457	7	2,221.990	7	2,600.523	7	2,979.057	7	3,357.590	7	3,736.123
8	333.1092	8	711.642	8	1,090.176	8	1,468.709	8	1,847.242	8	2,225.775	8	2,604.309	8	2,982.842	8	3,361.375	8	3,739.908
9	336.8946	9	715.428	9	1,093.961	9	1,472.494	9	1,851.027	9	2,229.561	9	2,608.094	9	2,986.627	9	3,365.160	9	3,743.694
90	340.6799	**190**	719.213	**290**	1,097.746	**390**	1,476.280	**490**	1,854.813	**590**	2,233.346	**690**	2,611.879	**790**	2,990.413	**890**	3,368.946	**990**	3,747.479
1	344.4652	1	722.998	1	1,101.532	1	1,480.065	1	1,858.598	1	2,237.131	1	2,615.665	1	2,994.198	1	3,372.731	1	3,751.264
2	348.2506	2	726.784	2	1,105.317	2	1,483.850	2	1,862.383	2	2,240.917	2	2,619.450	2	2,997.983	2	3,376.516	2	3,755.050
3	352.0359	3	730.569	3	1,109.102	3	1,487.636	3	1,866.169	3	2,244.702	3	2,623.235	3	3,001.769	3	3,380.302	3	3,758.835
4	355.8212	4	734.354	4	1,112.888	4	1,491.421	4	1,869.954	4	2,248.487	4	2,627.021	4	3,005.554	4	3,384.087	4	3,762.620
5	359.6066	5	738.140	5	1,116.673	5	1,495.206	5	1,873.739	5	2,252.273	5	2,630.806	5	3,009.339	5	3,387.872	5	3,766.406
6	363.3919	6	741.925	6	1,120.458	6	1,498.992	6	1,877.525	6	2,256.058	6	2,634.591	6	3,013.125	6	3,391.658	6	3,770.191
7	367.1772	7	745.710	7	1,124.244	7	1,502.777	7	1,881.310	7	2,259.843	7	2,638.377	7	3,016.910	7	3,395.443	7	3,773.976
8	370.9626	8	749.496	8	1,128.029	8	1,506.562	8	1,885.095	8	2,263.629	8	2,642.162	8	3,020.695	8	3,399.228	8	3,777.762
9	374.7479	9	753.281	9	1,131.814	9	1,510.348	9	1,888.881	9	2,267.414	9	2,645.947	9	3,024.481	9	3,403.014	9	3,781.547

CAPACITY—LITERS TO GALLONS

[Reduction factor: 1 liter=0.26417760 gallons]

Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons
0		**100**	26.4178	**200**	52.8355	**300**	79.2533	**400**	105.6710	**500**	132.0888	**600**	158.5066	**700**	184.9243	**800**	211.3421	**900**	237.7598
1	0.26418	1	26.6819	1	53.0997	1	79.5175	1	105.9352	1	132.3530	1	158.7707	1	185.1885	1	211.6063	1	238.0240
2	0.52836	2	26 9461	2	53.3639	2	79.7816	2	106.1994	2	132.6172	2	159.0349	2	185.4527	2	211.8704	2	238.2882
3	0.79253	3	27.2103	3	53.6281	3	80.0458	3	106.4636	3	132.8813	3	159.2991	3	185.7169	3	212.1346	3	238.5524
4	1.05671	4	27.4745	4	53.8922	4	80.3100	4	106.7278	4	133.1455	4	159.5633	4	185.9810	4	212.3988	4	238.8166
5	1.32089	5	27.7386	5	54.1564	5	80.5742	5	106.9919	5	133.4097	5	159.8274	5	186.2452	5	212.6630	5	239.0807
6	1.58507	6	28.0028	6	54.4206	6	80.8383	6	107.2561	6	133.6739	6	160.0916	6	186.5094	6	212.9271	6	239.3449
7	1.84924	7	28.2670	7	54.6848	7	81.1025	7	107.5203	7	133.9380	7	160.3558	7	186.7736	7	213.1913	7	239.6091
8	2.11342	8	28.5312	8	54.9489	8	81.3667	8	107.7845	8	134.2022	8	160.6200	8	187.0377	8	213.4555	8	239.8733
9	2.37760	9	28.7954	9	55.2131	9	81.6309	9	108.0486	9	134.4664	9	160.8842	9	187.3019	9	213.7197	9	240.1374
10	2.64178	**110**	29.0595	**210**	55.4773	**310**	81.8951	**410**	108.3128	**510**	134.7306	**610**	161.1483	**710**	187.5661	**810**	213.9839	**910**	240.4016
1	2.90595	1	29.3237	1	55.7415	1	82.1592	1	108.5770	1	134.9948	1	161.4125	1	187.8303	1	214.2480	1	240.6658
2	3.17013	2	29.5879	2	56.0057	2	82.4234	2	108.8412	2	135.2589	2	161.6767	2	188.0945	2	214.5122	2	240.9300
3	3.43431	3	29.8521	3	56.2698	3	82.6876	3	109.1053	3	135.5231	3	161.9409	3	188.3586	3	214.7764	3	241.1941
4	3.69849	4	30.1162	4	56.5340	4	82.9518	4	109.3695	4	135.7873	4	162.2050	4	188.6228	4	215.0406	4	241.4583
5	3.96266	5	30.3804	5	56.7982	5	83.2159	5	109.6337	5	136.0515	5	162.4692	5	188.8870	5	215.3047	5	241.7225
6	4.22684	6	30.6446	6	57.0624	6	83.4801	6	109.8979	6	136.3156	6	162.7334	6	189.1512	6	215.5689	6	241.9867
7	4.49102	7	30.9088	7	57.3265	7	83.7443	7	110.1621	7	136.5798	7	162.9976	7	189.4153	7	215.8331	7	242.2509
8	4.75520	8	31.1730	8	57.5907	8	84.0085	8	110.4262	8	136.8440	8	163.2618	8	189.6795	8	216.0973	8	242.5150
9	5.01937	9	31.4371	9	57.8549	9	84.2727	9	110.6904	9	137.1082	9	163.5259	9	189.9437	9	216.3615	9	242.7792
20	5.28355	**120**	31.7013	**220**	58.1191	**320**	84.5368	**420**	110.9546	**520**	137.3724	**620**	163.7901	**720**	190.2079	**820**	216.6256	**920**	243.0434
1	5.54773	1	31.9655	1	58.3832	1	84.8010	1	111.2188	1	137.6365	1	164.0543	1	190.4720	1	216.8898	1	243.3076
2	5.81191	2	32.2297	2	58.6474	2	85.0652	2	111.4829	2	137.9007	2	164.3185	2	190.7362	2	217.1540	2	243.5717
3	6.07608	3	32.4938	3	58.9116	3	85.3294	3	111.7471	3	138.1649	3	164.5826	3	191.0004	3	217.4182	3	243.8359
4	6.34026	4	32.7580	4	59.1758	4	85.5935	4	112.0113	4	138.4291	4	164.8468	4	191.2646	4	217.6823	4	244.1001
5	6.60444	5	33.0222	5	59.4400	5	85.8577	5	112.2755	5	138.6932	5	165.1110	5	191.5288	5	217.9465	5	244.3643
6	6.86862	6	33.2864	6	59.7041	6	86.1219	6	112.5397	6	138.9574	6	165.3752	6	191.7929	6	218.2107	6	244.6285
7	7.13280	7	33.5506	7	59.9683	7	86.3861	7	112.8038	7	139.2216	7	165.6394	7	192.0571	7	218.4749	7	244.8926
8	7.39697	8	33.8147	8	60.2325	8	86.6503	8	113.0680	8	139.4858	8	165.9035	8	192.3213	8	218.7391	8	245.1568
9	7.66115	9	34.0789	9	60.4967	9	86.9144	9	113.3322	9	139.7500	9	166.1677	9	192.5855	9	219.0032	9	245.4210
30	7.92533	**130**	34.3431	**230**	60.7608	**330**	87.1786	**430**	113.5964	**530**	140.0141	**630**	166.4319	**730**	192.8496	**830**	219.2674	**930**	245.6852
1	8.18951	1	34.6073	1	61.0250	1	87.4428	1	113.8605	1	140.2783	1	166.6961	1	193.1138	1	219.5316	1	245.9493
2	8.45368	2	34.8714	2	61.2892	2	87.7070	2	114.1247	2	140.5425	2	166.9602	2	193.3780	2	219.7958	2	246.2135
3	8.71786	3	35.1356	3	61.5534	3	87.9711	3	114.3889	3	140.8067	3	167.2244	3	193.6422	3	220.0599	3	246.4777
4	8.98204	4	35.3998	4	61.8176	4	88.2353	4	114.6531	4	141.0708	4	167.4886	4	193.9064	4	220.3241	4	246.7419
5	9.24622	5	35.6640	5	62.0817	5	88.4995	5	114.9173	5	141.3350	5	167.7528	5	194.1705	5	220.5883	5	247.0061
6	9.51039	6	35.9282	6	62.3459	6	88.7637	6	115.1814	6	141.5992	6	168.0170	6	194.4347	6	220.8525	6	247.2702
7	9.77457	7	36.1923	7	62.6101	7	89.0279	7	115.4456	7	141.8634	7	168.2811	7	194.6989	7	221.1167	7	247.5344
8	10.03875	8	36.4565	8	62.8743	8	89.2920	8	115.7098	8	142.1275	8	168.5453	8	194.9631	8	221.3808	8	247.7986
9	10.30293	9	36.7207	9	63.1384	9	89.5562	9	115.9740	9	142.3917	9	168.8095	9	195.2272	9	221.6450	9	248.0628
40	10.56710	**140**	36.9849	**240**	63.4026	**340**	89.8204	**440**	116.2381	**540**	142.6559	**640**	169.0737	**740**	195.4914	**840**	221.9092	**940**	248.3269
1	10.83128	1	37.2490	1	63.6668	1	90.0846	1	116.5023	1	142.9201	1	169.3378	1	195.7556	1	222.1734	1	248.5911
2	11.09546	2	37.5132	2	63.9310	2	90.3487	2	116.7665	2	143.1843	2	169.6020	2	196.0198	2	222.4375	2	248.8553
3	11.35964	3	37.7774	3	64.1952	3	90.6129	3	117.0307	3	143.4484	3	169.8662	3	196.2840	3	222.7017	3	249.1195
4	11.62381	4	38.0416	4	64.4593	4	90.8771	4	117.2949	4	143.7126	4	170.1304	4	196.5481	4	222.9659	4	249.3837
5	11.88799	5	38.3058	5	64.7235	5	91.1413	5	117.5590	5	143.9768	5	170.3946	5	196.8123	5	223.2301	5	249.6478
6	12.15217	6	38.5699	6	64.9877	6	91.4054	6	117.8232	6	144.2410	6	170.6587	6	197.0765	6	223.4942	6	249.9120
7	12.41635	7	38.8341	7	65.2519	7	91.6696	7	118.0874	7	144.5051	7	170.9229	7	197.3407	7	223.7584	7	250.1762
8	12.68052	8	39.0983	8	65.5160	8	91.9338	8	118.3516	8	144.7693	8	171.1871	8	197.6048	8	224.0226	8	250.4404
9	12.94470	9	39.3625	9	65.7802	9	92.1980	9	118.6157	9	145.0335	9	171.4513	9	197.8690	9	224.2868	9	250.7045

50	13.20888	**150**	39.6266	**250**	66.0444	**350**	92.4622	**450**	118.8799	**550**	145.2977	**650**	171.7154	**750**	198.1332	**850**	224.5510	**950**	250.9687
1	13.47306	1	39.8908	1	66.3086	1	92.7263	1	119.1441	1	145.5619	1	171.9796	1	198.3974	1	224.8151	1	251.2329
2	13.73724	2	40.1550	2	66.5728	2	92.9905	2	119.4083	2	145.8260	2	172.2438	2	198.6616	2	225.0793	2	251.4971
3	14.00141	3	40.4192	3	66.8369	3	93.2547	3	119.6725	3	146.0902	3	172.5080	3	198.9257	3	225.3435	3	251.7613
4	14.26559	4	40.6834	4	67.1011	4	93.5189	4	119.9366	4	146.3544	4	172.7722	4	199.1899	4	225.6077	4	252.0254
5	14.52977	5	40.9475	5	67.3653	5	93.7830	5	120.2008	5	146.6186	5	173.0363	5	199.4541	5	225.8718	5	252.2896
6	14.79395	6	41.2117	6	67.6295	6	94.0472	6	120.4650	6	146.8827	6	173.3005	6	199.7183	6	226.1360	6	252.5538
7	15.05812	7	41.4759	7	67.8936	7	94.3114	7	120.7292	7	147.1469	7	173.5647	7	199.9824	7	226.4002	7	252.8180
8	15.32230	8	41.7401	8	68.1578	8	94.5756	8	120.9933	8	147.4111	8	173.8289	8	200.2466	8	226.6644	8	253.0821
9	15.58648	9	42.0042	9	68.4220	9	94.8398	9	121.2575	9	147.6753	9	174.0930	9	200.5108	9	226.9286	9	253.3463
60	15.85066	**160**	42.2684	**260**	68.6862	**360**	95.1039	**460**	121.5217	**560**	147.9395	**660**	174.3572	**760**	200.7750	**860**	227.1927	**960**	253.6105
1	16.11483	1	42.5326	1	68.9504	1	95.3681	1	121.7859	1	148.2036	1	174.6214	1	201.0392	1	227.4569	1	253.8747
2	16.37901	2	42.7968	2	69.2145	2	95.6323	2	122.0501	2	148.4678	2	174.8856	2	201.3033	2	227.7211	2	254.1389
3	16.64319	3	43.0609	3	69.4787	3	95.8965	3	122.3142	3	148.7320	3	175.1497	3	201.5675	3	227.9853	3	254.4030
4	16.90737	4	43.3251	4	69.7429	4	96.1606	4	122.5784	4	148.9962	4	175.4139	4	201.8317	4	228.2494	4	254.6672
5	17.17154	5	43.5893	5	70.0071	5	96.4248	5	122.8426	5	149.2603	5	175.6781	5	202.0959	5	228.5136	5	254.9314
6	17.43572	6	43.8535	6	70.2712	6	96.6890	6	123.1068	6	149.5245	6	175.9423	6	202.3600	6	228.7778	6	255.1956
7	17.69990	7	44.1177	7	70.5354	7	96.9532	7	123.3709	7	149.7887	7	176.2065	7	202.6242	7	229.0420	7	255.4597
8	17.96408	8	44.3818	8	70.7996	8	97.2174	8	123.6351	8	150.0529	8	176.4706	8	202.8884	8	229.3062	8	255.7239
9	18.22825	9	44.6460	9	71.0638	9	97.4815	9	123.8993	9	150.3171	9	176.7348	9	203.1526	9	229.5703	9	255.9881
70	18.49243	**170**	44.9102	**270**	71.3280	**370**	97.7457	**470**	124.1635	**570**	150.5812	**670**	176.9990	**770**	203.4168	**870**	229.8345	**970**	256.2523
1	18.75661	1	45.1744	1	71.5921	1	98.0099	1	124.4276	1	150.8454	1	177.2632	1	203.6809	1	230.0987	1	256.5164
2	19.02079	2	45.4385	2	71.8563	2	98.2741	2	124.6918	2	151.1096	2	177.5273	2	203.9451	2	230.3629	2	256.7806
3	19.28496	3	45.7027	3	72.1205	3	98.5382	3	124.9560	3	151.3738	3	177.7915	3	204.2093	3	230.6270	3	257.0448
4	19.54914	4	45.9669	4	72.3847	4	98.8024	4	125.2202	4	151.6379	4	178.0557	4	204.4735	4	230.8912	4	257.3090
5	19.81332	5	46.2311	5	72.6488	5	99.0666	5	125.4844	5	151.9021	5	178.3199	5	204.7376	5	231.1554	5	257.5732
6	20.07750	6	46.4953	6	72.9130	6	99.3308	6	125.7485	6	152.1663	6	178.5841	6	205.0018	6	231.4196	6	257.8373
7	20.34168	7	46.7594	7	73.1772	7	99.5950	7	126.0127	7	152.4305	7	178.8482	7	205.2660	7	231.6838	7	258.1015
8	20.60585	8	47.0236	8	73.4414	8	99.8591	8	126.2769	8	152.6947	8	179.1124	8	205.5302	8	231.9479	8	258.3657
9	20.87003	9	47.2878	9	73.7056	9	100.1233	9	126.5411	9	152.9588	9	179.3766	9	205.7944	9	232.2121	9	258.6299
80	21.13421	**180**	47.5520	**280**	73.9697	**380**	100.3875	**480**	126.8052	**580**	153.2230	**680**	179.6408	**780**	206.0585	**880**	232.4763	**980**	258.8940
1	21.39839	1	47.8161	1	74.2339	1	100.6517	1	127.0694	1	153.4872	1	179.9049	1	206.3227	1	232.7405	1	259.1582
2	21.66256	2	48.0803	2	74.4981	2	100.9158	2	127.3336	2	153.7514	2	180.1691	2	206.5869	2	233.0046	2	259.4224
3	21.92674	3	48.3445	3	74.7623	3	101.1800	3	127.5978	3	154.0155	3	180.4333	3	206.8511	3	233.2688	3	259.6866
4	22.19092	4	48.6087	4	75.0264	4	101.4442	4	127.8620	4	154.2797	4	180.6975	4	207.1152	4	233.5330	4	259.9508
5	22.45510	5	48.8729	5	75.2906	5	101.7084	5	128.1261	5	154.5439	5	180.9617	5	207.3794	5	233.7972	5	260.2149
6	22.71927	6	49.1370	6	75.5548	6	101.9726	6	128.3903	6	154.8081	6	181.2258	6	207.6436	6	234.0614	6	260.4791
7	22.98345	7	49.4012	7	75.8190	7	102.2367	7	128.6545	7	155.0723	7	181.4900	7	207.9078	7	234.3255	7	260.7433
8	23.24763	8	49.6654	8	76.0831	8	102.5009	8	128.9187	8	155.3364	8	181.7542	8	208.1719	8	234.5897	8	261.0075
9	23.51181	9	49.9296	9	76.3473	9	102.7651	9	129.1828	9	155.6006	9	182.0184	9	208.4361	9	234.8539	9	261.2716
90	23.77598	**190**	50.1937	**290**	76.6115	**390**	103.0293	**490**	129.4470	**590**	155.8648	**690**	182.2825	**790**	208.7003	**890**	235.1181	**990**	261.5358
1	24.04016	1	50.4579	1	76.8757	1	103.2934	1	129.7112	1	156.1290	1	182.5467	1	208.9645	1	235.3822	1	261.8000
2	24.30434	2	50.7221	2	77.1399	2	103.5576	2	129.9754	2	156.3931	2	182.8109	2	209.2287	2	235.6464	2	262.0642
3	24.56852	3	50.9863	3	77.4040	3	103.8218	3	130.2396	3	156.6573	3	183.0751	3	209.4928	3	235.9106	3	262.3284
4	24.83269	4	51.2505	4	77.6682	4	104.0860	4	130.5037	4	156.9215	4	183.3393	4	209.7570	4	236.1748	4	262.5925
5	25.09687	5	51.5146	5	77.9324	5	104.3502	5	130.7679	5	157.1857	5	183.6034	5	210.0212	5	236.4390	5	262.8567
6	25.36105	6	51.7788	6	78.1966	6	104.6143	6	131.0321	6	157.4498	6	183.8676	6	210.2854	6	236.7031	6	263.1209
7	25.62523	7	52.0430	7	78.4607	7	104.8785	7	131.2963	7	157.7140	7	184.1318	7	210.5495	7	236.9673	7	263.3851
8	25.88940	8	52.3072	8	78.7249	8	105.1427	8	131.5604	8	157.9782	8	184.3960	8	210.8137	8	237.2315	8	263.6492
9	26.15358	9	52.5713	9	78.9891	9	105.4069	9	131.8246	9	158.2424	9	184.6601	9	211.0779	9	237.4957	9	263.9134

CAPACITY—BUSHELS TO HECTOLITERS

[Reduction factor: 1 bushel=0.35238330 hectoliters]

Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters
0		**100**	35.2383	**200**	70.4767	**300**	105.7150	**400**	140.9533	**500**	176.1917	**600**	211.4300	**700**	246.6683	**800**	281.9066	**900**	317.1450
1	0.35238	1	35.5907	1	70.8290	1	106.0674	1	141.3057	1	176.5440	1	211.7824	1	247.0207	1	282.2590	1	317.4974
2	0.70477	2	35.9431	2	71.1814	2	106.4198	2	141.6581	2	176.8964	2	212.1347	2	247.3731	2	282.6114	2	317.8497
3	1.05715	3	36.2955	3	71.5338	3	106.7721	3	142.0105	3	177.2488	3	212.4871	3	247.7255	3	282.9638	3	318.2021
4	1.40953	4	36.6479	4	71.8862	4	107.1245	4	142.3629	4	177.6012	4	212.8395	4	248.0778	4	283.3162	4	318.5545
5	1.76192	5	37.0002	5	72.2386	5	107.4769	5	142.7152	5	177.9536	5	213.1919	5	248.4302	5	283.6686	5	318.9069
6	2.11430	6	37.3526	6	72.5910	6	107.8293	6	143.0676	6	178.3060	6	213.5443	6	248.7826	6	284.0209	6	319.2593
7	2.46668	7	37.7050	7	72.9433	7	108.1817	7	143.4200	7	178.6583	7	213.8967	7	249.1350	7	284.3733	7	319.6117
8	2.81907	8	38.0574	8	73.2957	8	108.5341	8	143.7724	8	179.0107	8	214.2490	8	249.4874	8	284.7257	8	319.9640
9	3.17145	9	38.4098	9	73.6481	9	108.8864	9	144.1248	9	179.3631	9	214.6014	9	249.8398	9	285.0781	9	320.3164
10	3.52383	**110**	38.7622	**210**	74.0005	**310**	109.2388	**410**	144.4772	**510**	179.7155	**610**	214.9538	**710**	250.1921	**810**	285.4305	**910**	320.6688
1	3.87622	1	39.1145	1	74.3529	1	109.5912	1	144.8295	1	180.0679	1	215.3062	1	250.5445	1	285.7829	1	321.0212
2	4.22860	2	39.4669	2	74.7053	2	109.9436	2	145.1819	2	180.4203	2	215.6586	2	250.8969	2	286.1352	2	321.3736
3	4.58098	3	39.8193	3	75.0576	3	110.2960	3	145.5343	3	180.7726	3	216.0110	3	251.2493	3	286.4876	3	231.7260
4	4.93337	4	40.1717	4	75.4100	4	110.6484	4	145.8867	4	181.1250	4	216.3633	4	251.6017	4	286.8400	4	322.0783
5	5.28575	5	40.5241	5	75.7624	5	111.0007	5	146.2391	5	181.4774	5	216.7157	5	251.9541	5	287.1924	5	322.4307
6	5.63813	6	40.8765	6	76.1148	6	111.3531	6	146.5915	6	181.8298	6	217.0681	6	252.3064	6	287.5448	6	322.7831
7	5.99052	7	41.2288	7	76.4672	7	111.7055	7	146.9438	7	182.1822	7	217.4205	7	252.6588	7	287.8972	7	323.1355
8	6.34290	8	41.5812	8	76.8196	8	112.0579	8	147.2962	8	182.5346	8	217.7729	8	253.0112	8	288.2495	8	323.4879
9	6.69528	9	41.9336	9	77.1719	9	112.4103	9	147.6486	9	182.8869	9	218.1253	9	253.3636	9	288.6019	9	323.8403
20	7.04767	**120**	42.2860	**220**	77.5243	**320**	112.7627	**420**	148.0010	**520**	183.2393	**620**	218.4776	**720**	253.7160	**820**	288.9543	**920**	324.1926
1	7.40005	1	42.6384	1	77.8767	1	113.1150	1	148.3534	1	183.5917	1	218.8300	1	254.0684	1	289.3067	1	324.5450
2	7.75243	2	42.9908	2	78.2291	2	113.4674	2	148.7058	2	183.9441	2	219.1824	2	254.4207	2	289.6591	2	324.8974
3	8.10482	3	43.3431	3	78.5815	3	113.8198	3	149.0581	3	184.2965	3	219.5348	3	254.7731	3	290.0115	3	325.2498
4	8.45720	4	43.6955	4	78.9339	4	114.1722	4	149.4105	4	184.6489	4	219.8872	4	255.1255	4	290.3638	4	325.6022
5	8.80958	5	44.0479	5	79.2862	5	114.5246	5	149.7629	5	185.0012	5	220.2396	5	255.4779	5	290.7162	5	325.9546
6	9.16197	6	44.4003	6	79.6386	6	114.8770	6	150.1153	6	185.3536	6	220.5919	6	255.8303	6	291.0686	6	326.3069
7	9.51435	7	44.7527	7	79.9910	7	115.2293	7	150.4677	7	185.7060	7	220.9443	7	256.1827	7	291.4210	7	326.6593
8	9.86673	8	45.1051	8	80.3434	8	115.5817	8	150.8201	8	186.0584	8	221.2967	8	256.5350	8	291.7734	8	327.0117
9	10.21912	9	45.4574	9	80.6958	9	115.9341	9	151.1724	9	186.4108	9	221.6491	9	256.8874	9	292.1258	9	327.3641
30	10.57150	**130**	45.8098	**230**	81.0482	**330**	116.2865	**430**	151.5248	**530**	186.7631	**630**	222.0015	**730**	257.2398	**830**	292.4781	**930**	327.7165
1	10.92388	1	46.1622	1	81.4005	1	116.6389	1	151.8772	1	187.1155	1	222.3539	1	257.5922	1	292.8305	1	328.0689
2	11.27627	2	46.5146	2	81.7529	2	116.9913	2	152.2296	2	187.4679	2	222.7062	2	257.9446	2	293.1829	2	328.4212
3	11.62865	3	46.8670	3	82.1053	3	117.3436	3	152.5820	3	187.8203	3	223.0586	3	258.2970	3	293.5353	3	328.7736
4	11.98103	4	47.2194	4	82.4577	4	117.6960	4	152.9344	4	188.1727	4	223.4110	4	258.6493	4	293.8877	4	329.1260
5	12.33342	5	47.5717	5	82.8101	5	118.0484	5	153.2867	5	188.5251	5	223.7634	5	259 0017	5	294.2401	5	329.4784
6	12.68580	6	47.9241	6	83.1625	6	118.4008	6	153.6391	6	188.8774	6	224.1158	6	259.3541	6	294.5924	6	329.8308
7	13.03818	7	48.2765	7	83.5148	7	118.7532	7	153.9915	7	189.2298	7	224.4682	7	259.7065	7	294.9448	7	330.1832
8	13.39057	8	48.6289	8	83.8672	8	119.1056	8	154.3439	8	189.5822	8	224.8205	8	260.0589	8	295.2972	8	330.5355
9	13.74295	9	48.9813	9	84.2196	9	119.4579	9	154.6963	9	189.9346	9	225.1729	9	260.4113	9	295.6496	9	330.8879
40	14.09533	**140**	49.3337	**240**	84.5720	**340**	119.8103	**440**	155.0487	**540**	190.2870	**640**	225.5253	**740**	260.7636	**840**	296.0020	**940**	331.2403
1	14.44772	1	49.6860	1	84.9244	1	120.1627	1	155.4010	1	190.6394	1	225.8777	1	261.1160	1	296.3544	1	331.5927
2	14.80010	2	50.0384	2	85.2768	2	120.5151	2	155.7534	2	190.9917	2	226.2301	2	261.4684	2	296.7067	2	331.9451
3	15.15248	3	50.3908	3	85.6291	3	120.8675	3	156.1058	3	191.3441	3	226.5825	3	261.8208	3	297.0591	3	332.2975
4	15.50487	4	50.7432	4	85.9815	4	121.2199	4	156.4582	4	191.6965	4	226.9348	4	262.1732	4	297.4115	4	332.6498
5	15.85725	5	51.0956	5	86.3339	5	121.5722	5	156.8106	5	192.0489	5	227.2872	5	262.5256	5	297.7639	5	333.0022
6	16.20963	6	51.4480	6	86.6863	6	121.9246	6	157.1630	6	192.4013	6	227.6396	6	262.8779	6	298.1163	6	333.3546
7	16.56202	7	51.8003	7	87.0387	7	122.2770	7	157.5153	7	192.7537	7	227.9920	7	263.2303	7	298.4687	7	333.7070
8	16.91440	8	52.1527	8	87.3911	8	122.6294	8	157.8677	8	193.1060	8	228.3444	8	263.5827	8	298.8210	8	334.0594
9	17.26678	9	52.5051	9	87.7434	9	122.9818	9	158.2201	9	193.4584	9	228.6968	9	263.9351	9	299.1734	9	334.4118

50	17.61917	**150**	52.8575	**250**	88.0958	**350**	123.3342	**450**	158.5725	**550**	193.8108	**650**	229.0491	**750**	264.2875	**850**	299.5258	**950**	334.7641
1	17.97155	1	53.2099	1	88.4482	1	123.6865	1	158.9249	1	194.1632	1	229.4015	1	264.6399	1	299.8782	1	335.1165
2	18.32393	2	53.5623	2	88.8006	2	124.0389	2	159.2773	2	194.5156	2	229.7539	2	264.9922	2	300.2306	2	335.4689
3	18.67631	3	53.9146	3	89.1530	3	124.3913	3	159.6296	3	194.8680	3	230.1063	3	265.3446	3	300.5830	3	335.8213
4	19.02870	4	54.2670	4	89.5054	4	124.7437	4	159.9820	4	195.2203	4	230.4587	4	265.6970	4	300.9353	4	336.1737
5	19.38108	5	54.6194	5	89.8577	5	125.0961	5	160.3344	5	195.5727	5	230.8111	5	266.0494	5	301.2877	5	336.5261
6	19.73346	6	54.9718	6	90.2101	6	125.4485	6	160.6868	6	195.9251	6	231.1634	6	266.4018	6	301.6401	6	336.8784
7	20.08585	7	55.3242	7	90.5625	7	125.8008	7	161.0392	7	196.2775	7	231.5158	7	266.7542	7	301.9925	7	337.2308
8	20.43823	8	55.6766	8	90.9149	8	126.1532	8	161.3916	8	196.6299	8	231.8682	8	267.1065	8	302.3449	8	337.5832
9	20.79061	9	56.0289	9	91.2673	9	126.5056	9	161.7439	9	196.9823	9	232.2206	9	267.4589	9	302.6973	9	337.9356
60	21.14300	**160**	56.3813	**260**	91.6197	**360**	126.8580	**460**	162.0963	**560**	197.3346	**660**	232.5730	**760**	267.8113	**860**	303.0496	**960**	338.2880
1	21.49538	1	56.7337	1	91.9720	1	127.2104	1	162.4487	1	197.6870	1	232.9254	1	268.1637	1	303.4020	1	338.6404
2	21.84776	2	57.0861	2	92.3244	2	127.5628	2	162.8011	2	198.0394	2	233.2777	2	268.5161	2	303.7544	2	338.9927
3	22.20015	3	57.4385	3	92.6768	3	127.9151	3	163.1535	3	198.3918	3	233.6301	3	268.8685	3	304.1068	3	339.3451
4	22.55253	4	57.7909	4	93.0292	4	128.2675	4	163.5059	4	198.7442	4	233.9825	4	269.2208	4	304.4592	4	339.6975
5	22.90491	5	58.1432	5	93.3816	5	128.6199	5	163.8582	5	199.0966	5	234.3349	5	269.5732	5	304.8116	5	340.0499
6	23.25730	6	58.4956	6	93.7340	6	128.9723	6	164.2106	6	199.4489	6	234.6873	6	269.9256	6	305.1639	6	340.4023
7	23.60968	7	58.8480	7	94.0863	7	129.3247	7	164.5630	7	199.8013	7	235.0397	7	270.2780	7	305.5163	7	340.7547
8	23.96206	8	59.2004	8	94.4387	8	129.6771	8	164.9154	8	200.1537	8	235.3920	8	270.6304	8	305.8687	8	341.1070
9	24.31445	9	59.5528	9	94.7911	9	130.0294	9	165.2678	9	200.5061	9	235.7444	9	270.9828	9	306.2211	9	341.4594
70	24.66683	**170**	59.9052	**270**	95.1435	**370**	130.3818	**470**	165.6202	**570**	200.8585	**670**	236.0968	**770**	271.3351	**870**	306.5735	**970**	341.8118
1	25.01921	1	60.2575	1	95.4959	1	130.7342	1	165.9725	1	201.2109	1	236.4492	1	271.6875	1	306.9259	1	342.1642
2	25.37160	2	60.6099	2	95.8483	2	131.0866	2	166.3249	2	201.5632	2	236.8016	2	272.0399	2	307.2782	2	342.5166
3	25.72398	3	60.9623	3	96.2006	3	131.4390	3	166.6773	3	201.9156	3	237.1540	3	272.3923	3	307.6306	3	342.8690
4	26.07636	4	61.3147	4	96.5530	4	131.7914	4	167.0297	4	202.2680	4	237.5063	4	272.7447	4	307.9830	4	343.2213
5	26.42875	5	61.6671	5	96.9054	5	132.1437	5	167.3821	5	202.6204	5	237.8587	5	273.0971	5	308.3354	5	343.5737
6	26.78113	6	62.0195	6	97.2578	6	132.4961	6	167.7345	6	202.9728	6	238.2111	6	273.4494	6	308.6878	6	343.9261
7	27.13351	7	62.3718	7	97.6102	7	132.8485	7	168.0868	7	203.3252	7	238.5635	7	273.8018	7	309.0402	7	344.2785
8	27.48590	8	62.7242	8	97.9626	8	133.2009	8	168.4392	8	203.6775	8	238.9159	8	274.1542	8	309.3925	8	344.6309
9	27.83828	9	63.0766	9	98.3149	9	133.5533	9	168.7916	9	204.0299	9	239.2683	9	274.5066	9	309.7449	9	344.9833
80	28.19066	**180**	63.4290	**280**	98.6673	**380**	133.9057	**480**	169.1440	**580**	204.3823	**680**	239.6206	**780**	274.8590	**880**	310.0973	**980**	345.3356
1	28.54305	1	63.7814	1	99.0197	1	134.2580	1	169.4964	1	204.7347	1	239.9730	1	275.2114	1	310.4497	1	345.6880
2	28.89543	2	64.1338	2	99.3721	2	134.6104	2	169.8488	2	205.0871	2	240.3254	2	275.5637	2	310.8021	2	346.0404
3	29.24781	3	64.4861	3	99.7245	3	134.9628	3	170.2011	3	205.4395	3	240.6778	3	275.9161	3	311.1545	3	346.3928
4	29.60020	4	64.8385	4	100.0769	4	135.3152	4	170.5535	4	205.7918	4	241.0302	4	276.2685	4	311.5068	4	346.7452
5	29.95258	5	65.1909	5	100.4292	5	135.6676	5	170.9059	5	206.1442	5	241.3826	5	276.6209	5	311.8592	5	347.0976
6	30.30496	6	65.5433	6	100.7816	6	136.0200	6	171.2583	6	206.4966	6	241.7349	6	276.9733	6	312.2116	6	347.4499
7	30.65735	7	65.8957	7	101.1340	7	136.3723	7	171.6107	7	206.8490	7	242.0873	7	277.3257	7	312.5640	7	347.8023
8	31.00973	8	66.2481	8	101.4864	8	136.7247	8	171.9631	8	207.2014	8	242.4397	8	277.6780	8	312.9164	8	348.1547
9	31.36211	9	66.6004	9	101.8388	9	137.0771	9	172.3154	9	207.5538	9	242.7921	9	278.0304	9	313.2688	9	348.5071
90	31.71450	**190**	66.9528	**290**	102.1912	**390**	137.4295	**490**	172.6678	**590**	207.9061	**690**	243.1445	**790**	278.3828	**890**	313.6211	**990**	348.8595
1	32.06688	1	67.3052	1	102.5435	1	137.7819	1	173.0202	1	208.2585	1	243.4969	1	278.7352	1	313.9735	1	349.2119
2	32.41926	2	67.6576	2	102.8959	2	138.1343	2	173.3726	2	208.6109	2	243.8492	2	279.0876	2	314.3259	2	349.5642
3	32.77165	3	68.0100	3	103.2483	3	138.4866	3	173.7250	3	208.9633	3	244.2016	3	279.4400	3	314.6783	3	349.9166
4	33.12403	4	68.3624	4	103.6007	4	138.8390	4	174.0774	4	209.3157	4	244.5540	4	279.7923	4	315.0307	4	350.2690
5	33.47641	5	68.7147	5	103.9531	5	139.1914	5	174.4297	5	209.6681	5	244.9064	5	280.1447	5	315.3831	5	350.6214
6	33.82880	6	69.0671	6	104.3055	6	139.5438	6	174.7821	6	210.0204	6	245.2588	6	280.4971	6	315.7354	6	350.9738
7	34.18118	7	69.4195	7	104.6578	7	139.8962	7	175.1345	7	210.3728	7	245.6112	7	280.8495	7	316.0878	7	351.3262
8	34.53356	8	69.7719	8	105.0102	8	140.2486	8	175.4869	8	210.7252	8	245.9635	8	281.2019	8	316.4402	8	351.6785
9	34.88595	9	70.1243	9	105.3626	9	140.6009	9	175.8393	9	211.0776	9	246.3159	9	281.5543	9	316.7926	9	352.0309

CAPACITY—HECTOLITERS TO BUSHELS

[Reduction factor: 1 hectoliter=2.8378189 bushels]

Hecto-liters	Bush-els	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels
0		100	283.782	200	567.564	300	851.346	400	1,135.128	500	1,418.909	600	1,702.691	700	1,986.473	800	2,270.255	900	2,554.037
1	2.8378	1	286.620	1	570.402	1	854.183	1	1,137.965	1	1,421.747	1	1,705.529	1	1,989.311	1	2,273.093	1	2,556.875
2	5.6756	2	289.458	2	573.239	2	857.021	2	1,140.803	2	1,424.585	2	1,708.367	2	1,992.149	2	2,275.931	2	2,559.713
3	8.5135	3	292.295	3	576.077	3	859.859	3	1,143.641	3	1,427.423	3	1,711.205	3	1,994.987	3	2,278.769	3	2,562.550
4	11.3513	4	295.133	4	578.915	4	862.697	4	1,146.479	4	1,430.261	4	1,714.043	4	1,997.825	4	2,281.606	4	2,565.388
5	14.1891	5	297.971	5	581.753	5	865.535	5	1,149.317	5	1,433.099	5	1,716.880	5	2,000.662	5	2,284.444	5	2,568.226
6	17.0269	6	300.809	6	584.591	6	868.373	6	1,152.154	6	1,435.936	6	1,719.718	6	2,003.500	6	2,287.282	6	2,571.064
7	19.8647	7	303.647	7	587.429	7	871.210	7	1,154.992	7	1,438.774	7	1,722.556	7	2,006.338	7	2,290.120	7	2,573.902
8	22.7026	8	306.484	8	590.266	8	874.048	8	1,157.830	8	1,441.612	8	1,725.394	8	2,009.176	8	2,292.958	8	2,576.740
9	25.5404	9	309.322	9	593.104	9	876.886	9	1,160.668	9	1,444.450	9	1,728.232	9	2,012.014	9	2,295.796	9	2,579.577
10	28.3782	110	312.160	210	595.942	310	879.724	410	1,163.506	510	1,447.288	610	1,731.070	710	2,014.851	810	2,298.633	910	2,582.415
1	31.2160	1	314.998	1	598.780	1	882.562	1	1,166.344	1	1,450.125	1	1,733.907	1	2,017.689	1	2,301.471	1	2,585.253
2	34.0538	2	317.836	2	601.618	2	885.400	2	1,169.181	2	1,452.963	2	1,736.745	2	2,020.527	2	2,304.309	2	2,588.091
3	36.8916	3	320.674	3	604.455	3	888.237	3	1,172.019	3	1,455.801	3	1,739.583	3	2,023.365	3	2,307.147	3	2,590.929
4	39.7295	4	323.511	4	607.293	4	891.075	4	1,174.857	4	1,458.639	4	1,742.421	4	2,026.203	4	2,309.985	4	2,593.766
5	42.5673	5	326.349	5	610.131	5	893.913	5	1,177.695	5	1,461.477	5	1,745.259	5	2,029.041	5	2,312.822	5	2,596.604
6	45.4051	6	329.187	6	612.969	6	896.751	6	1,180.533	6	1,464.315	6	1,748.096	6	2,031.878	6	2,315.660	6	2,599.442
7	48.2429	7	332.025	7	615.807	7	899.589	7	1,183.370	7	1,467.152	7	1,750.934	7	2,034.716	7	2,318.498	7	2,602.280
8	51.0807	8	334.863	8	618.645	8	902.426	8	1,186.208	8	1,469.990	8	1,753.772	8	2,037.554	8	2,321.336	8	2,605.118
9	53.9186	9	337.700	9	621.482	9	905.264	9	1,189.046	9	1,472.828	9	1,756.610	9	2,040.392	9	2,324.174	9	2,607.956
20	56.7564	120	340.538	220	624.320	320	908.102	420	1,191.884	520	1,475.666	620	1,759.448	720	2,043.230	820	2,327.012	920	2,610.793
1	59.5942	1	343.376	1	627.158	1	910.940	1	1,194.722	1	1,478.504	1	1,762.286	1	2,046.067	1	2,329.849	1	2,613.631
2	62.4320	2	346.214	2	629.996	2	913.778	2	1,197.560	2	1,481.341	2	1,765.123	2	2,048.905	2	2,332.687	2	2,616.469
3	65.2698	3	349.052	3	632.834	3	916.616	3	1,200.397	3	1,484.179	3	1,767.961	3	2,051.743	3	2,335.525	3	2,619.307
4	68.1077	4	351.890	4	635.671	4	919.453	4	1,203.235	4	1,487.017	4	1,770.799	4	2,054.581	4	2,338.363	4	2,622.145
5	70.9455	5	354.727	5	638.509	5	922.291	5	1,206.073	5	1,489.855	5	1,773.637	5	2,057.419	5	2,341.201	5	2,624.982
6	73.7833	6	357.565	6	641.347	6	925.129	6	1,208.911	6	1,492.693	6	1,776.475	6	2,060.257	6	2,344.038	6	2,627.820
7	76.6211	7	360.403	7	644.185	7	927.967	7	1,211.749	7	1,495.531	7	1,779.312	7	2,063.094	7	2,346.876	7	2,630.658
8	79.4589	8	363.241	8	647.023	8	930.805	8	1,214.586	8	1,498.368	8	1,782.150	8	2,065.932	8	2,349.714	8	2,633.496
9	82.2967	9	366.079	9	649.861	9	933.642	9	1,217.424	9	1,501.206	9	1,784.988	9	2,068.770	9	2,352.552	9	2,636.334
30	85.1346	130	368.916	230	652.698	330	936.480	430	1,220.262	530	1,504.044	630	1,787.826	730	2,071.608	830	2,355.390	930	2,639.172
1	87.9724	1	371.754	1	655.536	1	939.318	1	1,223.100	1	1,506.882	1	1,790.664	1	2,074.446	1	2,358.228	1	2,642.009
2	90.8102	2	374.592	2	658.374	2	942.156	2	1,225.938	2	1,509.720	2	1,793.502	2	2,077.283	2	2,361.065	2	2,644.847
3	93.6480	3	377.430	3	661.212	3	944.994	3	1,228.776	3	1,512.557	3	1,796.339	3	2,080.121	3	2,363.903	3	2,647.685
4	96.4858	4	380.268	4	664.050	4	947.832	4	1,231.613	4	1,515.395	4	1,799.177	4	2,082.959	4	2,366.741	4	2,650.523
5	99.3237	5	383.106	5	666.887	5	950.669	5	1,234.451	5	1,518.233	5	1,802.015	5	2,085.797	5	2,369.579	5	2,653.361
6	102.1615	6	385.943	6	669.725	6	953.507	6	1,237.289	6	1,521.071	6	1,804.853	6	2,088.635	6	2,372.417	6	2,656.199
7	104.9993	7	388.781	7	672.563	7	956.345	7	1,240.127	7	1,523.909	7	1,807.691	7	2,091.473	7	2,375.254	7	2,659.036
8	107.8371	8	391.619	8	675.401	8	959.183	8	1,242.965	8	1,526.747	8	1,810.528	8	2,094.310	8	2,378.092	8	2,661.874
9	110.6749	9	394.457	9	678.239	9	962.021	9	1,245.803	9	1,529.584	9	1,813.366	9	2,097.148	9	2,380.930	9	2,664.712
40	113.5128	140	397.295	240	681.077	340	964.858	440	1,248.640	540	1,532.422	640	1,816.204	740	2,099.986	840	2,383.768	940	2,667.550
1	116.3506	1	400.132	1	683.914	1	967.696	1	1,251.478	1	1,535.260	1	1,819.042	1	2,102.824	1	2,386.606	1	2,670.388
2	119.1884	2	402.970	2	686.752	2	970.534	2	1,254.316	2	1,538.098	2	1,821.880	2	2,105.662	2	2,389.444	2	2,673.225
3	122.0262	3	405.808	3	689.590	3	973.372	3	1,257.154	3	1,540.936	3	1,824.718	3	2,108.499	3	2,392.281	3	2,676.063
4	124.8640	4	408.646	4	692.428	4	976.210	4	1,259.992	4	1,543.773	4	1,827.555	4	2,111.337	4	2,395.119	4	2,678.901
5	127.7019	5	411.484	5	695.266	5	979.048	5	1,262.829	5	1,546.611	5	1,830.393	5	2,114.175	5	2,397.957	5	2,681.739
6	130.5397	6	414.322	6	698.103	6	981.885	6	1,265.667	6	1,549.449	6	1,833.231	6	2,117.013	6	2,400.795	6	2,684.577
7	133.3775	7	417.159	7	700.941	7	984.723	7	1,268.505	7	1,552.287	7	1,836.069	7	2,119.851	7	2,403.633	7	2,687.415
8	136.2153	8	419.997	8	703.779	8	987.561	8	1,271.343	8	1,555.125	8	1,838.907	8	2,122.689	8	2,406.470	8	2,690.252
9	139.0531	9	422.835	9	706.617	9	990.399	9	1,274.181	9	1,557.963	9	1,841.744	9	2,125.526	9	2,409.308	9	2,693.090

50	141.8909	**150**	425.673	**250**	709.455	**350**	993.237	**450**	1,277.019	**550**	1,560.800	**650**	1,844.582	**750**	2,128.364	**850**	2,412.146	**950**	2,695.928
1	144.7288	1	428.511	1	712.293	1	996.074	1	1,279.856	1	1,563.638	1	1,847.420	1	2,131.202	1	2,414.984	1	2,698.766
2	147.5666	2	431.348	2	715.130	2	998.912	2	1,282.694	2	1,566.476	2	1,850.258	2	2,134.040	2	2,417.822	2	2,701.604
3	150.4044	3	434.186	3	717.968	3	1,001.750	3	1,285.532	3	1,569.314	3	1,853.096	3	2,136.878	3	2,420.660	3	2,704.441
4	153.2422	4	437.024	4	720.806	4	1,004.588	4	1,288.370	4	1,572.152	4	1,855.934	4	2,139.715	4	2,423.497	4	2,707.279
5	156.0800	5	439.862	5	723.644	5	1,007.426	5	1,291.208	5	1,574.989	5	1,858.771	5	2,142.553	5	2,426.335	5	2,710.117
6	158.9179	6	442.700	6	726.482	6	1,010.264	6	1,294.045	6	1,577.827	6	1,861.609	6	2,145.391	6	2,429.173	6	2,712.955
7	161.7557	7	445.538	7	729.319	7	1,013.101	7	1,296.883	7	1,580.665	7	1,864.447	7	2,148.229	7	2,432.011	7	2,715.793
8	164.5935	8	448.375	8	732.157	8	1,015.939	8	1,299.721	8	1,583.503	8	1,867.285	8	2,151.067	8	2,434.849	8	2,718.631
9	167.4313	9	451.213	9	734.995	9	1,018.777	9	1,302.559	9	1,586.341	9	1,870.123	9	2,153.905	9	2,437.686	9	2,721.468
60	170.2691	**160**	454.051	**260**	737.833	**360**	1,021.615	**460**	1,305.397	**560**	1,589.179	**660**	1,872.960	**760**	2,156.742	**860**	2,440.524	**960**	2,724.306
1	173.1070	1	456.889	1	740.671	1	1,024.453	1	1,308.235	1	1,592.016	1	1,875.798	1	2,159.580	1	2,443.362	1	2,727.144
2	175.9448	2	459.727	2	743.509	1	1,027.290	2	1,311.072	2	1,594.854	2	1,878.636	2	2,162.418	2	2,446.200	2	2,729.982
3	178.7826	3	462.564	3	746.346	3	1,030.128	3	1,313.910	3	1,597.692	3	1,881.474	3	2,165.256	3	2,449.038	3	2,732 820
4	181.6204	4	465.402	4	749.184	4	1,032.966	4	1,316.748	4	1,600.530	4	1,884.312	4	2,168.094	4	2,451.876	4	2,735.657
5	184.4582	5	468.240	5	752.022	5	1,035.804	5	1,319.586	5	1,603.368	5	1,887.150	5	2,170.931	5	2,454.713	5	2,738.495
6	187.2960	6	471.078	6	754.860	6	1,038.642	6	1,322.424	6	1,606.206	6	1,889.987	6	2,173.769	6	2,457.551	6	2,741.333
7	190.1339	7	473.916	7	757.698	7	1,041.480	7	1,325.261	7	1,609.043	7	1,892.825	7	2,176.607	7	2,460.389	7	2,744.171
8	192.9717	8	476.754	8	760.535	8	1,044.317	8	1,328.099	8	1,611.881	8	1,895.663	8	2,179.445	8	2,463.227	8	2,747.009
9	195.8095	9	479.591	9	763.373	9	1,047.155	9	1,330.937	9	1,614.719	9	1,898.501	9	2,182.283	9	2,466.065	9	2,749.847
70	198.6473	**170**	482.429	**270**	766.211	**370**	1,049.993	**470**	1,333.775	**570**	1,617.557	**670**	1,901.339	**770**	2,185.121	**870**	2,468.902	**970**	2,752.684
1	201.4851	1	485.267	1	769.049	1	1,052.831	1	1,336.613	1	1,620.395	1	1,904.176	1	2,187.958	1	2,471.740	1	2,755.522
2	204.3230	2	488.105	2	771.887	2	1,055.669	2	1,339.451	2	1,623.232	2	1,907.014	2	2,190.796	2	2,474.578	2	2,758.360
3	207.1608	3	490.943	3	774.725	3	1,058.506	3	1,342.288	3	1,626.070	3	1,909.852	3	2,193.634	3	2,477.416	3	2,761.198
4	209.9986	4	493.780	4	777.562	4	1,061.344	4	1,345.126	4	1,628.908	4	1,912.690	4	2,196.472	4	2,480.254	4	2,764.036
5	212.8364	5	496.618	5	780.400	5	1,064.182	5	1,347.964	5	1,631.746	5	1,915.528	5	2,199.310	5	2,483.092	5	2,766.873
6	215.6742	6	499.456	6	783.238	6	1,067.020	6	1,350.802	6	1,634.584	6	1,918.366	6	2,202.147	6	2,485.929	6	2,769.711
7	218.5121	7	502.294	7	786.076	7	1,069.858	7	1,353.640	7	1,637.422	7	1,921.203	7	2,204.985	7	2,488.767	7	2,772.549
8	221.3499	8	505.132	8	788.914	8	1,072.696	8	1,356.477	8	1,640.259	8	1,924.041	8	2,207.823	8	2,491.605	8	2,775.387
9	224.1877	9	507.970	9	791.751	9	1,075.533	9	1,359.315	9	1,643.097	9	1,926.879	9	2,210.661	9	2,494.443	9	2,778 225
80	227.0255	**180**	510.807	**280**	794.589	**380**	1,078.371	**480**	1,362.153	**580**	1,645.935	**680**	1,929.717	**780**	2,213.499	**880**	2,497.281	**980**	2,781.063
1	229.8633	1	513.645	1	797.427	1	1,081.209	1	1,364.991	1	1,648.773	1	1,932.555	1	2,216.337	1	2,500.118	1	2,783.900
2	232.7012	2	516.483	2	800.265	2	1,084.047	2	1,367.829	2	1,651.611	2	1,935.393	2	2,219.174	2	2,502.956	2	2,786.738
3	235.5390	3	519.321	3	803.103	3	1,086.885	3	1,370.667	3	1,654.448	3	1,938.230	3	2,222.012	3	2,505.794	3	2,789.576
4	238.3768	4	522.159	4	805.941	4	1,089.722	4	1,373.504	4	1,657.286	4	1,941.068	4	2,224.850	4	2,508.632	4	2,792.414
5	241.2146	5	524.996	5	808.778	5	1,092.560	5	1,376.342	5	1,660.124	5	1,943.906	5	2,227.688	5	2,511.470	5	2,795.252
6	244.0524	6	527.834	6	811.616	6	1,095.398	6	1,379.180	6	1,662.962	6	1,946.744	6	2,230.526	6	2,514.308	6	2,798.089
7	246.8902	7	530.672	7	814.454	7	1,098.236	7	1,382.018	7	1,665.800	7	1,949.582	7	2,233.363	7	2,517.145	7	2,800.927
8	249.7281	8	533.510	8	817.292	8	1,101.074	8	1,384.856	8	1,668.638	8	1,952.419	8	2,236.201	8	2,519.983	8	2,803.765
9	252.5659	9	536.348	9	820.130	9	1,103.912	9	1,387.693	9	1,671.475	9	1,955.257	9	2,239.039	9	2,522.821	9	2,806.603
90	255.4037	**190**	539.186	**290**	822.967	**390**	1,106.749	**490**	1,390.531	**590**	1,674.313	**690**	1,958.095	**790**	2,241.877	**890**	2,525.659	**990**	2,809.441
1	258.2415	1	542.023	1	825.805	1	1,109.587	1	1,393.369	1	1,677.151	1	1,960.933	1	2,244.715	1	2,528.497	1	2,812.279
2	261.0793	2	544.861	2	828.643	2	1,112.425	2	1,396.207	2	1,679.989	2	1,963.771	2	2,247.553	2	2,531.334	2	2,815.116
3	263.9172	3	547.699	3	831.481	3	1,115.263	3	1,399.045	3	1,682.827	3	1,966.609	3	2,250.390	3	2,534.172	3	2,817.954
4	266.7550	4	550.537	4	834.319	4	1,118.101	4	1,401.883	4	1,685.664	4	1,969.446	4	2,253.228	4	2,537.010	4	2,820.792
5	269.5928	5	553.375	5	837.157	5	1,120.938	5	1,404.720	5	1,688.502	5	1,972.284	5	2,256.066	5	2,539.848	5	2,823.630
6	272.4306	6	556.213	6	839.994	6	1,123.776	6	1,407.558	6	1,691.340	6	1,975.122	6	2,258.904	6	2,542.686	6	2,826.468
7	275.2684	7	559.050	7	842.832	7	1,126.614	7	1,410.396	7	1,694.178	7	1,977.960	7	2,261.742	7	2,545.524	7	2,829.305
8	278.1063	8	561.888	8	845.670	8	1,129.452	8	1,413.234	8	1,697.016	8	1,980.798	8	2,264.579	8	2,548.361	8	2,832.143
9	280.9441	9	564.726	9	848.508	9	1,132.290	9	1,416.072	9	1,699.854	9	1,983.635	9	2,267.417	9	2,551.199	9	2,834.981

MASS—AVOIRDUPOIS POUNDS TO KILOGRAMS

[Reduction factor: 1 avoirdupois pound=0.4535924277 kilogram]

Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos
0		**100**	45.35924	**200**	90.71849	**300**	136.07773	**400**	181.43697	**500**	226.79621	**600**	272.15546	**700**	317.51470	**800**	362.87394	**900**	408.23318
1	0.45359	1	45.81284	1	91.17208	1	136.53132	1	181.89056	1	227.24981	1	272.60905	1	317.96829	1	363.32753	1	408.68678
2	.90718	2	46.26643	2	91.62567	2	136.98491	2	182.34416	2	227.70340	2	273.06264	2	318.42188	2	363.78113	2	409.14037
3	1.36078	3	46.72002	3	92.07926	3	137.43851	3	182.79775	3	228.15699	3	273.51623	3	318.87548	3	364.23472	3	409.59396
4	1.81437	4	47.17361	4	92.53286	4	137.89210	4	183.25134	4	228.61058	4	273.96983	4	319.32907	4	364.68831	4	410.04755
5	2.26796	5	47.62720	5	92.98645	5	138.34569	5	183.70493	5	229.06418	5	274.42342	5	319.78266	5	365.14190	5	410.50115
6	2.72155	6	48.08080	6	93.44004	6	138.79928	6	184.15853	6	229.51777	6	274.87701	6	320.23625	6	365.59550	6	410.95474
7	3.17515	7	48.53439	7	93.89363	7	139.25288	7	184.61212	7	229.97136	7	275.33060	7	320.68985	7	366.04909	7	411.40833
8	3.62874	8	48.98798	8	94.34722	8	139.70647	8	185.06571	8	230.42495	8	275.78420	8	321.14344	8	366.50268	8	411.86192
9	4.08233	9	49.44157	9	94.80082	9	140.16006	9	185.51930	9	230.87855	9	276.23779	9	321.59703	9	366.95627	9	412.31552
10	4.53592	**110**	49.89517	**210**	95.25441	**310**	140.61365	**410**	185.97290	**510**	231.33214	**610**	276.69138	**710**	322.05062	**810**	367.40987	**910**	412.76911
1	4.98952	1	50.34876	1	95.70800	1	141.06725	1	186.42649	1	231.78573	1	277.14497	1	322.50422	1	367.86346	1	413.22270
2	5.44311	2	50.80235	2	96.16159	2	141.52084	2	186.88008	2	232.23932	2	277.59857	2	322.95781	2	368.31705	2	413.67629
3	5.89670	3	51.25594	3	96.61519	3	141.97443	3	187.33367	3	232.69292	3	278.05216	3	323.41140	3	368.77064	3	414.12989
4	6.35029	4	51.70954	4	97.06878	4	142.42802	4	187.78727	4	233.14651	4	278.50575	4	323.86499	4	369.22424	4	414.58348
5	6.80389	5	52.16313	5	97.52237	5	142.88161	5	188.24086	5	233.60010	5	278.95934	5	324.31859	5	369.67783	5	415.03707
6	7.25748	6	52.61672	6	97.97596	6	143.33521	6	188.69445	6	234.05369	6	279.41294	6	324.77218	6	370.13142	6	415.49066
7	7.71107	7	53.07031	7	98.42956	7	143.78880	7	189.14804	7	234.50729	7	279.86653	7	325.22577	7	370.58501	7	415.94426
8	8.16466	8	53.52391	8	98.88315	8	144.24239	8	189.60163	8	234.96088	8	280.32012	8	325.67936	8	371.03861	8	416.39785
9	8.61826	9	53.97750	9	99.33674	9	144.69598	9	190.05523	9	235.41447	9	280.77371	9	326.13296	9	371.49220	9	416.85144
20	9.07185	**120**	54.43109	**220**	99.79033	**320**	145.14958	**420**	190.50882	**520**	235.86806	**620**	281.22731	**720**	326.58655	**820**	371.94579	**920**	417.30503
1	9.52544	1	54.88468	1	100.24393	1	145.60317	1	190.96241	1	236.32165	1	281.68090	1	327.04014	1	372.39938	1	417.75863
2	9.97903	2	55.33828	2	100.69752	2	146.05676	2	191.41600	2	236.77525	2	282.13449	2	327.49373	2	372.85298	2	418.21222
3	10.43263	3	55.79187	3	101.15111	3	146.51035	3	191.86960	3	237.22884	3	282.58808	3	327.94733	3	373.30657	3	418.66581
4	10.88622	4	56.24546	4	101.60470	4	146.96395	4	192.32319	4	237.68243	4	283.04167	4	328.40092	4	373.76016	4	419.11940
5	11.33981	5	56.69905	5	102.05830	5	147.41754	5	192.77678	5	238.13602	5	283.49527	5	328.85451	5	374.21375	5	419.57300
6	11.79340	6	57.15265	6	102.51189	6	147.87113	6	193.23037	6	238.58962	6	283.94886	6	329.30810	6	374.66735	6	420.02659
7	12.24700	7	57.60624	7	102.96548	7	148.32472	7	193.68397	7	239.04321	7	284.40245	7	329.76169	7	375.12094	7	420.48018
8	12.70059	8	58.05983	8	103.41907	8	148.77832	8	194.13756	8	239.49680	8	284.85604	8	330.21529	8	375.57453	8	420.93377
9	13.15418	9	58.51342	9	103.87267	9	149.23191	9	194.59115	9	239.95039	9	285.30964	9	330.66888	9	376.02812	9	421.38737
30	13.60777	**130**	58.96702	**230**	104.32626	**330**	149.68550	**430**	195.04474	**530**	240.40399	**630**	285.76323	**730**	331.12247	**830**	376.48171	**930**	421.84096
1	14.06137	1	59.42061	1	104.77985	1	150.13909	1	195.49834	1	240.85758	1	286.21682	1	331.57606	1	376.93531	1	422.29455
2	14.51496	2	59.87420	2	105.23344	2	150.59269	2	195.95193	2	241.31117	2	286.67041	2	332.02966	2	377.38890	2	422.74814
3	14.96855	3	60.32779	3	105.68704	3	151.04628	3	196.40552	3	241.76476	3	287.12401	3	332.48325	3	377.84249	3	423.20174
4	15.42214	4	60.78139	4	106.14063	4	151.49987	4	196.85911	4	242.21836	4	287.57760	4	332.93684	4	378.29608	4	423.65533
5	15.87573	5	61.23498	5	106.59422	5	151.95346	5	197.31271	5	242.67195	5	288.03119	5	333.39043	5	378.74968	5	424.10892
6	16.32933	6	61.68857	6	107.04781	6	152.40706	6	197.76630	6	243.12554	6	288.48478	6	333.84403	6	379.20327	6	424.56251
7	16.78292	7	62.14216	7	107.50141	7	152.86065	7	198.21989	7	243.57913	7	288.93838	7	334.29762	7	379.65686	7	425.01610
8	17.23651	8	62.59576	8	107.95500	8	153.31424	8	198.67348	8	244.03273	8	289.39197	8	334.75121	8	380.11045	8	425.46970
9	17.69010	9	63.04935	9	108.40859	9	153.76783	9	199.12708	9	244.48632	9	289.84556	9	335.20480	9	380.56405	9	425.92329
40	18.14370	**140**	63.50294	**240**	108.86218	**340**	154.22143	**440**	199.58067	**540**	244.93991	**640**	290.29915	**740**	335.65840	**840**	381.01764	**940**	426.37688
1	18.59729	1	63.95653	1	109.31578	1	154.67502	1	200.03426	1	245.39350	1	290.75275	1	336.11199	1	381.47123	1	426.83047
2	19.05088	2	64.41012	2	109.76937	2	155.12861	2	200.48785	2	245.84710	2	291.20634	2	336.56558	2	381.92482	2	427.28407
3	19.50447	3	64.86372	3	110.22296	3	155.58220	3	200.94145	3	246.30069	3	291.65993	3	337.01917	3	382.37842	3	427.73766
4	19.95807	4	65.31731	4	110.67655	4	156.03580	4	201.39504	4	246.75428	4	292.11352	4	337.47277	4	382.83201	4	428.19125
5	20.41166	5	65.77090	5	111.13014	5	156.48939	5	201.84863	5	247.20787	5	292.56712	5	337.92636	5	383.28560	5	428.64484
6	20.86525	6	66.22449	6	111.58374	6	156.94298	6	202.30222	6	247.66147	6	293.02071	6	338.37995	6	383.73919	6	429.09844
7	21.31884	7	66.67809	7	112.03733	7	157.39657	7	202.75582	7	248.11506	7	293.47430	7	338.83354	7	384.19279	7	429.55203
8	21.77244	8	67.13168	8	112.49092	8	157.85016	8	203.20941	8	248.56865	8	293.92789	8	339.28714	8	384.64638	8	430.00562
9	22.22603	9	67.58527	9	112.94451	9	158.30376	9	203.66300	9	249.02224	9	294.38149	9	339.74073	9	385.09997	9	430.45921

50	22.67962	**150**	68.03886	**250**	113.39811	**350**	158.75735	**450**	204.11659	**550**	249.47584	**650**	294.83508	**750**	340.19432	**850**	385.55356	**950**	430.91281
1	23.13321	1	68.49246	1	113.85170	1	159.21094	1	204.57018	1	249.92943	1	295.28867	1	340.64791	1	386.00716	1	431.36640
2	23.58681	2	68.94605	2	114.30529	2	159.66453	2	205.02378	2	250.38302	2	295.74226	2	341.10151	2	386.46075	2	431.81999
3	24.04040	3	69.39964	3	114.75888	3	160.11813	3	205.47737	3	250.83661	3	296.19586	3	341.55510	3	386.91434	3	432.27358
4	24.49399	4	69.85323	4	115.21248	4	160.57172	4	205.93096	4	251.29020	4	296.64945	4	342.00869	4	387.36793	4	432.72718
5	24.94758	5	70.30683	5	115.66607	5	161.02531	5	206.38455	5	251.74380	5	297.10304	5	342.46228	5	387.82153	5	433.18077
6	25.40118	6	70.76042	6	116.11966	6	161.47890	6	206.83815	6	252.19739	6	297.55663	6	342.91588	6	388.27512	6	433.63436
7	25.85477	7	71.21401	7	116.57325	7	161.93250	7	207.29174	7	252.65098	7	298.01022	7	343.36947	7	388.72871	7	434.08795
8	26.30836	8	71.66760	8	117.02685	8	162.38609	8	207.74533	8	253.10457	8	298.46382	8	343.82306	8	389.18230	8	434.54155
9	26.76195	9	72.12120	9	117.48044	9	162.83968	9	208.19892	9	253.55817	9	298.91741	9	344.27665	9	389.63590	9	434.99514
60	27.21555	**160**	72.57479	**260**	117.93403	**360**	163.29327	**460**	208.65252	**560**	254.01176	**660**	299.37100	**760**	344.73025	**860**	390.08949	**960**	435.44873
1	27.66914	1	73.02838	1	118.38762	1	163.74687	1	209.10611	1	254.46535	1	299.82459	1	345.18384	1	390.54308	1	435.90232
2	28.12273	2	73.48197	2	118.84122	2	164.20046	2	209.55970	2	254.91894	2	300.27819	2	345.63743	2	390.99667	2	436.35592
3	28.57632	3	73.93557	3	119.29481	3	164.65405	3	210.01329	3	255.37254	3	300.73178	3	346.09102	3	391.45027	3	436.80951
4	29.02992	4	74.38916	4	119.74840	4	165.10764	4	210.46689	4	255.82613	4	301.18537	4	346.54461	4	391.90386	4	437.26310
5	29.48351	5	74.84275	5	120.20199	5	165.56124	5	210.92048	5	256.27972	5	301.63896	5	346.99821	5	392.35745	5	437.71669
6	29.93710	6	75.29634	6	120.65559	6	166.01483	6	211.37407	6	256.73331	6	302.09256	6	347.45180	6	392.81104	6	438.17029
7	30.39069	7	75.74994	7	121.10918	7	166.46842	7	211.82766	7	257.18691	7	302.54615	7	347.90539	7	393.26463	7	438.62388
8	30.84429	8	76.20353	8	121.56277	8	166.92201	8	212.28126	8	257.64050	8	302.99974	8	348.35898	8	393.71823	8	439.07747
9	31.29788	9	76.65712	9	122.01636	9	167.37561	9	212.73485	9	258.09409	9	303.45333	9	348.81258	9	394.17182	9	439.53106
70	31.75147	**170**	77.11071	**270**	122.46996	**370**	167.82920	**470**	213.18844	**570**	258.54768	**670**	303.90693	**770**	349.26617	**870**	394.62541	**970**	439.98465
1	32.20506	1	77.56431	1	122.92355	1	168.28279	1	213.64203	1	259.00128	1	304.36052	1	349.71976	1	395.07900	1	440.43825
2	32.65865	2	78.01790	2	123.37714	2	168.73638	2	214.09563	2	259.45487	2	304.81411	2	350.17335	2	395.53260	2	440.89184
3	33.11225	3	78.47149	3	123.83073	3	169.18998	3	214.54922	3	259.90846	3	305.26770	3	350.62695	3	395.98619	3	441.34543
4	33.56584	4	78.92509	4	124.28433	4	169.64357	4	215.00281	4	260.36205	4	305.72130	4	351.08054	4	396.43978	4	441.79902
5	34.01943	5	79.37867	5	124.73792	5	170.09716	5	215.45640	5	260.81565	5	306.17489	5	351.53415	5	396.89337	5	442.25262
6	34.47302	6	79.83227	6	125.19151	6	170.55075	6	215.91000	6	261.26924	6	306.62848	6	351.98772	6	397.34697	6	442.70621
7	34.92662	7	80.28586	7	125.64510	7	171.00435	7	216.36359	7	261.72283	7	307.08207	7	352.44132	7	397.80056	7	443.15980
8	35.38021	8	80.73945	8	126.09869	8	171.45794	8	216.81718	8	262.17642	8	307.53567	8	352.89491	8	398.25415	8	443.61339
9	35.83380	9	81.19304	9	126.55229	9	171.91153	9	217.27077	9	262.63002	9	307.98926	9	353.34850	9	398.70774	9	444.06699
80	36.28739	**180**	81.64664	**280**	127.00588	**380**	172.36512	**480**	217.72437	**580**	263.08361	**680**	308.44285	**780**	353.80209	**880**	399.16134	**980**	444.52058
1	36.74099	1	82.10023	1	127.45947	1	172.81871	1	218.17796	1	263.53720	1	308.89644	1	354.25569	1	399.61493	1	444.97417
2	37.19458	2	82.55382	2	127.91306	2	173.27231	2	218.63155	2	263.99079	2	309.35004	2	354.70928	2	400.06852	2	445.42776
3	37.64817	3	83.00741	3	128.36666	3	173.72590	3	219.08514	3	264.44439	3	309.80363	3	355.16287	3	400.52211	3	445.88136
4	38.10176	4	83.46101	4	128.82025	4	174.17949	4	219.53874	4	264.89798	4	310.25722	4	355.61646	4	400.97571	4	446.33495
5	38.55536	5	83.91460	5	129.27384	5	174.63308	5	219.99233	5	265.35157	5	310.71081	5	356.07006	5	401.42930	5	446.78854
6	39.00895	6	84.36819	6	129.72743	6	175.08668	6	220.44592	6	265.80516	6	311.16441	6	356.52365	6	401.88289	6	447.24213
7	39.46254	7	84.82178	7	130.18103	7	175.54027	7	220.89951	7	266.25876	7	311.61800	7	356.97724	7	402.33648	7	447.69573
8	39.91613	8	85.27538	8	130.63462	8	175.99386	8	221.35310	8	266.71235	8	312.07159	8	357.43083	8	402.79008	8	448.14932
9	40.36973	9	85.72897	9	131.08821	9	176.44745	9	221.80670	9	267.16594	9	312.52518	9	357.88443	9	403.24367	9	448.60291
90	40.82332	**190**	86.18256	**290**	131.54180	**390**	176.90105	**490**	222.26029	**590**	267.61953	**690**	312.97878	**790**	358.33802	**890**	403.69726	**990**	449.05650
1	41.27691	1	86.63615	1	131.99540	1	177.35464	1	222.71388	1	268.07312	1	313.43237	1	358.79161	1	404.15085	1	449.51010
2	41.73050	2	87.08975	2	132.44899	2	177.80823	2	223.16747	2	268.52672	2	313.88596	2	359.24520	2	404.60445	2	449.96369
3	42.18410	3	87.54334	3	132.90258	3	178.26182	3	223.62107	3	268.98031	3	314.33955	3	359.69880	3	405.05804	3	450.41728
4	42.63769	4	87.99693	4	133.35617	4	178.71542	4	224.07466	4	269.43390	4	314.79314	4	360.15239	4	405.51163	4	450.87087
5	43.09128	5	88.45052	5	133.80977	5	179.16901	5	224.52825	5	269.88749	5	315.24674	5	360.60598	5	405.96522	5	451.32447
6	43.54487	6	88.90412	6	134.26336	6	179.62260	6	224.98184	6	270.34109	6	315.70033	6	361.05957	6	406.41882	6	451.77806
7	43.99847	7	89.35771	7	134.71695	7	180.07619	7	225.43544	7	270.79468	7	316.15392	7	361.51316	7	406.87241	7	452.23165
8	44.45206	8	89.81130	8	135.17054	8	180.52979	8	225.88903	8	271.24827	8	316.60751	8	361.96676	8	407.32600	8	452.68524
9	44.90565	9	90.26489	9	135.62414	9	180.98338	9	226.34262	9	271.70186	9	317.06111	9	362.42035	9	407.77959	9	453.13884

MASS—KILOGRAMS TO AVOIRDUPOIS POUNDS

[Reduction factor: 1 kilogram=2.204622341 avoirdupois pounds]

Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds
0		**100**	220.4622	**200**	440.9245	**300**	661.3867	**400**	881.8489	**500**	1,102.3112	**600**	1,322.7734	**700**	1,543.2356	**800**	1,763.6979	**900**	1,984.1601
1	2.2046	1	222.6669	1	443.1291	1	663.5913	1	884.0536	1	1,104.5158	1	1,324.9780	1	1,545.4403	1	1,765.9025	1	1,986.3647
2	4.4092	2	224.8715	2	445.3337	2	665.7959	2	886.2582	2	1,106.7204	2	1,327.1826	2	1,547.6449	2	1,768.1071	2	1,988.5694
3	6.6139	3	227.0761	3	447.5383	3	668.0006	3	888.4628	3	1,108.9250	3	1,329.3873	3	1,549.8495	3	1,770.3117	3	1,990.7740
4	8.8185	4	229.2807	4	449.7430	4	670.2052	4	890.6674	4	1,111.1297	4	1,331.5919	4	1,552.0541	4	1,772.5164	4	1,992.9786
5	11.0231	5	231.4853	5	451.9476	5	672.4098	5	892.8720	5	1,113.3343	5	1,333.7965	5	1,554.2588	5	1,774.7210	5	1,995.1832
6	13.2277	6	233.6900	6	454.1522	6	674.6144	6	895.0767	6	1,115.5389	6	1,336.0011	6	1,556.4634	6	1,776.9256	6	1,997.3878
7	15.4324	7	235.8946	7	456.3568	7	676.8191	7	897.2813	7	1,117.7435	7	1,338.2058	7	1,558.6680	7	1,779.1302	7	1,999.5925
8	17.6370	8	238.0992	8	458.5614	8	679.0237	8	899.4859	8	1,119.9481	8	1,340.4104	8	1,560.8726	8	1,781.3349	8	2,001.7971
9	19.8416	9	240.3038	9	460.7661	9	681.2283	9	901.6905	9	1,122.1528	9	1,342.6150	9	1,563.0772	9	1,783.5395	9	2,004.0017
10	22.0462	**110**	242.5085	**210**	462.9707	**310**	683.4329	**410**	903.8952	**510**	1,124.3574	**610**	1,344.8196	**710**	1,565.2819	**810**	1,785.7441	**910**	2,006.2063
1	24.2508	1	244.7131	1	465.1753	1	685.6375	1	906.0998	1	1,126.5620	1	1,347.0243	1	1,567.4865	1	1,787.9487	1	2,008.4110
2	26.4555	2	246.9177	2	467.3799	2	687.8422	2	908.3044	2	1,128.7666	2	1,349.2289	2	1,569.6911	2	1,790.1533	2	2,010.6156
3	28.6601	3	249.1223	3	469.5846	3	690.0468	3	910.5090	3	1,130.9713	3	1,351.4335	3	1,571.8957	3	1,792.3580	3	2,012.8202
4	30.8647	4	251.3269	4	471.7892	4	692.2514	4	912.7136	4	1,133.1759	4	1,353.6381	4	1,574.1004	4	1,794.5626	4	2,015.0248
5	33.0693	5	253.5316	5	473.9938	5	694.4560	5	914.9183	5	1,135.3805	5	1,355.8427	5	1,576.3050	5	1,796.7672	5	2,017.2294
6	35.2740	6	255.7362	6	476.1984	6	696.6607	6	917.1229	6	1,137.5851	6	1,358.0474	6	1,578.5096	6	1,798.9718	6	2,019.4341
7	37.4786	7	257.9408	7	478.4030	7	698.8653	7	919.3275	7	1,139.7898	7	1,360.2520	7	1,580.7142	7	1,801.1765	7	2,021.6387
8	39.6832	8	260.1454	8	480.6077	8	701.0699	8	921.5321	8	1,141.9944	8	1,362.4566	8	1,582.9188	8	1,803.3811	8	2,023.8433
9	41.8878	9	262.3501	9	482.8123	9	703.2745	9	923.7368	9	1,144.1990	9	1,364.6612	9	1,585.1235	9	1,805.5857	9	2,026.0479
20	44.0924	**120**	264.5547	**220**	485.0169	**320**	705.4791	**420**	925.9414	**520**	1,146.4036	**620**	1,366.8659	**720**	1,587.3281	**820**	1,807.7903	**920**	2,028.2526
1	46.2971	1	266.7593	1	487.2215	1	707.6838	1	928.1460	1	1,148.6082	1	1,369.0705	1	1,589.5327	1	1,809.9949	1	2,030.4572
2	48.5017	2	268.9639	2	489.4262	2	709.8884	2	930.3506	2	1,150.8129	2	1,371.2751	2	1,591.7373	2	1,812.1996	2	2,032.6618
3	50.7063	3	271.1685	3	491.6308	3	712.0930	3	932.5553	3	1,153.0175	3	1,373.4797	3	1,593.9420	3	1,814.4042	3	2,034.8664
4	52.9109	4	273.3732	4	493.8354	4	714.2976	4	934.7599	4	1,155.2221	4	1,375.6843	4	1,596.1466	4	1,816.6088	4	2,037.0710
5	55.1156	5	275.5778	5	496.0400	5	716.5023	5	936.9645	5	1,157.4267	5	1,377.8890	5	1,598.3512	5	1,818.8134	5	2,039.2757
6	57.3202	6	277.7824	6	498.2446	6	718.7069	6	939.1691	6	1,159.6314	6	1,380.0936	6	1,600.5558	6	1,821.0181	6	2,041.4803
7	59.5248	7	279.9870	7	500.4493	7	720.9115	7	941.3737	7	1,161.8360	7	1,382.2982	7	1,602.7604	7	1,823.2227	7	2,043.6849
8	61.7294	8	282.1917	8	502.6539	8	723.1161	8	943.5784	8	1,164.0406	8	1,384.5028	8	1,604.9651	8	1,825.4273	8	2,045.8895
9	63.9340	9	284.3963	9	504.8585	9	725.3208	9	945.7830	9	1,166.2452	9	1,386.7075	9	1,607.1697	9	1,827.6319	9	2,048.0942
30	66.1387	**130**	286.6009	**230**	507.0631	**330**	727.5254	**430**	947.9876	**530**	1,168.4498	**630**	1,388.9121	**730**	1,609.3743	**830**	1,829.8365	**930**	2,050.2988
1	68.3433	1	288.8055	1	509.2678	1	729.7300	1	950.1922	1	1,170.6545	1	1,391.1167	1	1,611.5789	1	1,832.0412	1	2,052.5034
2	70.5479	2	291.0101	2	511.4724	2	731.9346	2	952.3969	2	1,172.8591	2	1,393.3213	2	1,613.7836	2	1,834.2458	2	2,054.7080
3	72.7525	3	293.2148	3	513.6770	3	734.1392	3	954.6015	3	1,175.0637	3	1,395.5259	3	1,615.9882	3	1,836.4504	3	2,056.9126
4	74.9572	4	295.4194	4	515.8816	4	736.3439	4	956.8061	4	1,177.2683	4	1,397.7306	4	1,618.1928	4	1,838.6550	4	2,059.1173
5	77.1618	5	297.6240	5	518.0863	5	738.5485	5	959.0107	5	1,179.4730	5	1,399.9352	5	1,620.3974	5	1,840.8597	5	2,061.3219
6	79.3664	6	299.8286	6	520.2909	6	740.7531	6	961.2153	6	1,181.6776	6	1,402.1398	6	1,622.6020	6	1,843.0643	6	2,063.5265
7	81.5710	7	302.0333	7	522.4955	7	742.9577	7	963.4200	7	1,183.8822	7	1,404.3444	7	1,624.8067	7	1,845.2689	7	2,065.7311
8	83.7756	8	304.2379	8	524.7001	8	745.1624	8	965.6246	8	1,186.0868	8	1,406.5491	8	1,627.0113	8	1,847.4735	8	2,067.9358
9	85.9803	9	306.4425	9	526.9047	9	747.3670	9	967.8292	9	1,188.2914	9	1,408.7537	9	1,629.2159	9	1,849.6781	9	2,070.1404
40	88.1849	**140**	308.6471	**240**	529.1094	**340**	749.5716	**440**	970.0338	**540**	1,190.4961	**640**	1,410.9583	**740**	1,631.4205	**840**	1,851.8828	**940**	2,072.3450
1	90.3895	1	310.8518	1	531.3140	1	751.7762	1	972.2385	1	1,192.7007	1	1,413.1629	1	1,633.6252	1	1,854.0874	1	2,074.5496
2	92.5941	2	313.0564	2	533.5186	2	753.9808	2	974.4431	2	1,194.9053	2	1,415.3675	2	1,635.8298	2	1,856.2920	2	2,076.7542
3	94.7988	3	315.2610	3	535.7232	3	756.1855	3	976.6477	3	1,197.1099	3	1,417.5722	3	1,638.0344	3	1,858.4966	3	2,078.9589
4	97.0034	4	317.4656	4	537.9279	4	758.3901	4	978.8523	4	1,199.3146	4	1,419.7768	4	1,640.2390	4	1,860.7013	4	2,081.1635
5	99.2080	5	319.6702	5	540.1325	5	760.5947	5	981.0569	5	1,201.5192	5	1,421.9814	5	1,642.4436	5	1,862.9059	5	2,083.3681
6	101.4126	6	321.8749	6	542.3371	6	762.7993	6	983.2616	6	1,203.7238	6	1,424.1860	6	1,644.6483	6	1,865.1105	6	2,085.5727
7	103.6173	7	324.0795	7	544.5417	7	765.0040	7	985.4662	7	1,205.9284	7	1,426.3907	7	1,646.8529	7	1,867.3151	7	2,087.7774
8	105.8219	8	326.2841	8	546.7463	8	767.2086	8	987.6708	8	1,208.1330	8	1,428.5953	8	1,649.0575	8	1,869.5197	8	2,089.9820
9	108.0265	9	328.4887	9	548.9510	9	769.4132	9	989.8754	9	1,210.3377	9	1,430.7999	9	1,651.2621	9	1,871.7244	9	2,092.1866

50	110.2311	**150**	330.6934	**250**	551.1556	**350**	771.6178	**450**	992.0801	**550**	1,212.5423	**650**	1,433.0045	**750**	1,653.4668	**850**	1,873.9290	**950**	2,094.3912
1	112.4357	1	332.8980	1	553.3602	1	773.8224	1	994.2847	1	1,214.7469	1	1,435.2091	1	1,655.6714	1	1,876.1336	1	2,096.5958
2	114.6404	2	335.1026	2	555.5648	2	776.0271	2	996.4893	2	1,216.9515	2	1,437.4138	2	1,657.8760	2	1,878.3382	2	2,098.8005
3	116.8450	3	337.3072	3	557.7695	3	778.2317	3	998.6939	3	1,219.1562	3	1,439.6184	3	1,660.0806	3	1,880.5429	3	2,101.0051
4	119.0496	4	339.5118	4	559.9741	4	780.4363	4	1,000.8985	4	1,221.3608	4	1,441.8230	4	1,662.2852	4	1,882.7475	4	2,103.2097
5	121.2542	5	341.7165	5	562.1787	5	782.6409	5	1,003.1032	5	1,223.5654	5	1,444.0276	5	1,664.4899	5	1,884.9521	5	2,105.4143
6	123.4589	6	343.9211	6	564.3833	6	784.8456	6	1,005.3078	6	1,225.7700	6	1,446.2323	6	1,666.6945	6	1,887.1567	6	2,107.6190
7	125.6635	7	346.1257	7	566.5879	7	787.0502	7	1,007.5124	7	1,227.9746	7	1,448.4369	7	1,668.8991	7	1,889.3613	7	2,109.8236
8	127.8681	8	348.3303	8	568.7926	8	789.2548	8	1,009.7170	8	1,230.1793	8	1,450.6415	8	1,671.1037	8	1,891.5660	8	2,112.0282
9	130.0727	9	350.5350	9	570.9972	9	791.4594	9	1,011.9217	9	1,232.3839	9	1,452.8461	9	1,673.3084	9	1,893.7706	9	2,114.2328
60	132.2773	**160**	352.7396	**260**	573.2018	**360**	793.6640	**460**	1,014.1263	**560**	1,234.5885	**660**	1,455.0507	**760**	1,675.5130	**860**	1,895.9752	**960**	2,116.4374
1	134.4820	1	354.9442	1	575.4064	1	795.8687	1	1,016.3309	1	1,236.7931	1	1,457.2554	1	1,677.7176	1	1,898.1798	1	2,118.6421
2	136.6866	2	357.1488	2	577.6111	2	798.0733	2	1,018.5355	2	1,238.9978	2	1,459.4600	2	1,679.9222	2	1,900.3845	2	2,120.8467
3	138.8912	3	359.3534	3	579.8157	3	800.2779	3	1,020.7401	3	1,241.2024	3	1,461.6646	3	1,682.1268	3	1,902.5891	3	2,123.0513
4	141.0958	4	361.5581	4	582.0203	4	802.4825	4	1,022.9448	4	1,243.4070	4	1,463.8692	4	1,684.3315	4	1,904.7937	4	2,125.2559
5	143.3005	5	363.7627	5	584.2249	5	804.6872	5	1,025.1494	5	1,245.6116	5	1,466.0739	5	1,686.5361	5	1,906.9983	5	2,127.4606
6	145.5051	6	365.9673	6	586.4295	6	806.8918	6	1,027.3540	6	1,247.8162	6	1,468.2785	6	1,688.7407	6	1,909.2029	6	2,129.6652
7	147.7097	7	368.1719	7	588.6342	7	809.0964	7	1,029.5586	7	1,250.0209	7	1,470.4831	7	1,690.9453	7	1,911.4076	7	2,131.8698
8	149.9143	8	370.3766	8	590.8388	8	811.3010	8	1,031.7633	8	1,252.2255	8	1,472.6877	8	1,693.1500	8	1,913.6122	8	2,134.0744
9	152.1189	9	372.5812	9	593.0434	9	813.5056	9	1,033.9679	9	1,254.4301	9	1,474.8923	9	1,695.3546	9	1,915.8168	9	2,136.2790
70	154.3236	**170**	374.7858	**270**	595.2480	**370**	815.7103	**470**	1,036.1725	**570**	1,256.6347	**670**	1,477.0970	**770**	1,697.5592	**870**	1,918.0214	**970**	2,138.4837
1	156.5282	1	376.9904	1	597.4527	1	817.9149	1	1,038.3771	1	1,258.8394	1	1,479.3016	1	1,699.7638	1	1,920.2261	1	2,140.6883
2	158.7328	2	379.1950	2	599.6573	2	820.1195	2	1,040.5817	2	1,261.0440	2	1,481.5062	2	1,701.9684	2	1,922.4307	2	2,142.8929
3	160.9374	3	381.3997	3	601.8619	3	822.3241	3	1,042.7864	3	1,263.2486	3	1,483.7108	3	1,704.1731	3	1,924.6353	3	2,145.0975
4	163.1421	4	383.6043	4	604.0665	4	824.5288	4	1,044.9910	4	1,265.4532	4	1,485.9155	4	1,706.3777	4	1,926.8399	4	2,147.3022
5	165.3467	5	385.8089	5	606.2711	5	826.7334	5	1,047.1956	5	1,267.6578	5	1,488.1201	5	1,708.5823	5	1,929.0445	5	2,149.5068
6	167.5513	6	388.0135	6	608.4758	6	828.9380	6	1,049.4002	6	1,269.8625	6	1,490.3247	6	1,710.7869	6	1,931.2492	6	2,151.7114
7	169.7559	7	390.2182	7	610.6804	7	831.1426	7	1,051.6049	7	1,272.0671	7	1,492.5293	7	1,712.9916	7	1,933.4538	7	2,153.9160
8	171.9605	8	392.4228	8	612.8850	8	833.3472	8	1,053.8095	8	1,274.2717	8	1,494.7339	8	1,715.1962	8	1,935.6584	8	2,156.1206
9	174.1652	9	394.6274	9	615.0896	9	835.5519	9	1,056.0141	9	1,276.4763	9	1,496.9386	9	1,717.4008	9	1,937.8630	9	2,158.3253
80	176.3698	**180**	396.8320	**280**	617.2943	**380**	837.7565	**480**	1,058.2187	**580**	1,278.6810	**680**	1,499.1432	**780**	1,719.6054	**880**	1,940.0677	**980**	2,160.5299
1	178.5744	1	399.0366	1	619.4989	1	839.9611	1	1,060.4233	1	1,280.8856	1	1,501.3478	1	1,721.8100	1	1,942.2723	1	2,162.7345
2	180.7790	2	401.2413	2	621.7035	2	842.1657	2	1,062.6280	2	1,283.0902	2	1,503.5524	2	1,724.0147	2	1,944.4769	2	2,164.9391
3	182.9837	3	403.4459	3	623.9081	3	844.3704	3	1,064.8326	3	1,285.2948	3	1,505.7571	3	1,726.2193	3	1,946.6815	3	2,167.1438
4	185.1883	4	405.6505	4	626.1127	4	846.5750	4	1,067.0372	4	1,287.4994	4	1,507.9617	4	1,728.4239	4	1,948.8861	4	2,169.3484
5	187.3929	5	407.8551	5	628.3174	5	848.7796	5	1,069.2418	5	1,289.7041	5	1,510.1663	5	1,730.6285	5	1,951.0908	5	2,171.5530
6	189.5975	6	410.0598	6	630.5220	6	850.9842	6	1,071.4465	6	1,291.9087	6	1,512.3709	6	1,732.8332	6	1,953.2954	6	2,173.7576
7	191.8021	7	412.2644	7	632.7266	7	853.1888	7	1,073.6511	7	1,294.1133	7	1,514.5755	7	1,735.0378	7	1,955.5000	7	2,175.9623
8	194.0068	8	414.4690	8	634.9312	8	855.3935	8	1,075.8557	8	1,296.3179	8	1,516.7802	8	1,737.2424	8	1,957.7046	8	2,178.1669
9	196.2114	9	416.6736	9	637.1359	9	857.5981	9	1,078.0603	9	1,298.5226	9	1,518.9848	9	1,739.4470	9	1,959.9093	9	2,180.3715
90	198.4160	**190**	418.8782	**290**	639.3405	**390**	859.8027	**490**	1,080.2649	**590**	1,300.7272	**690**	1,521.1894	**790**	1,741.6516	**890**	1,962.1139	**990**	2,182.5761
1	200.6206	1	421.0829	1	641.5451	1	862.0073	1	1,082.4696	1	1,302.9318	1	1,523.3940	1	1,743.8563	1	1,964.3185	1	2,184.7807
2	202.8253	2	423.2875	2	643.7497	2	864.2120	2	1,084.6742	2	1,305.1364	2	1,525.5987	2	1,746.0609	2	1,966.5231	2	2,186.9854
3	205.0299	3	425.4921	3	645.9543	3	866.4166	3	1,086.8788	3	1,307.3410	3	1,527.8033	3	1,748.2655	3	1,968.7278	3	2,189.1900
4	207.2345	4	427.6967	4	648.1590	4	868.6212	4	1,089.0834	4	1,309.5457	4	1,530.0079	4	1,750.4701	4	1,970.9324	4	2,191.3946
5	209.4391	5	429.9014	5	650.3636	5	870.8258	5	1,091.2881	5	1,311.7503	5	1,532.2125	5	1,752.6748	5	1,973.1370	5	2,193.5992
6	211.6437	6	432.1060	6	652.5682	6	873.0304	6	1,093.4927	6	1,313.9549	6	1,534.4171	6	1,754.8794	6	1,975.3416	6	2,195.8039
7	213.8484	7	434.3106	7	654.7728	7	875.2351	7	1,095.6973	7	1,316.1595	7	1,536.6218	7	1,757.0840	7	1,977.5462	7	2,198.0085
8	216.0530	8	436.5152	8	656.9775	8	877.4397	8	1,097.9019	8	1,318.3642	8	1,538.8264	8	1,759.2886	8	1,979.7509	8	2,200.2131
9	218.2576	9	438.7198	9	659.1821	9	879.6443	9	1,100.1065	9	1,320.5688	9	1,541.0310	9	1,761.4933	9	1,981.9555	9	2,202.4177

X. METRIC AND ENGLISH DISTANCE EQUIVALENTS FOR ATHLETIC EVENTS (TRACK AND FIELD)

1. METRIC UNITS IN ATHLETICS

On November 22, 1932 the Amateur Athletic Union took official action adopting metric distances for track events to be run in athletic meets held under the jurisdiction of that body.

It may be assumed that other athletic bodies will follow the lead of the AAU in adopting metric distances for track events, and also that the use of metric units may be extended to include field events.

With this thought in mind, the following tables of equivalents have been prepared to aid in conversions between the two systems of units and to assist those not entirely familiar with the metric system to gain a mental picture of the various distances expressed in meters.

Explanation: In table 1 are given the equivalent metric and English distances for the principal track events of both indoor and outdoor meets.

In table 2 are given the metric equivalents, expressed in meters, for all distances expressed in feet, inches, and binary fractions of an inch, up to 1 000 feet. This table may be conveniently used to find the metric equivalent of any distance, given to the nearest ⅛ inch, over a range sufficiently wide to include all field events by the simple process of breaking the distance down into convenient parts, finding the equivalent of each part, and adding them together to obtain the total equivalent.

In order to avoid confusion and possible error, it is recommended that all metric distances in track and field events be expressed in meters and decimal fractions of the meter.

Example: Find the metric equivalent of 242 feet, 10⅛ inches.

200 feet	=	60.960 meters
40 feet	=	12.192 meters
2 feet	=	.610 meter
10 inches	=	.254 meter
⅛ inch	=	.003 meter
242 ft, 10⅛ inches	=	74.019 meters

2. DISTANCE EQUIVALENTS

Basis { 1 meter = 39.37 inches = 3.280 8 feet = 1.093 6 yards
1 kilometer = 1 000 meters = 0.621 370 mile

TABLE 1.—*Track events*

Yards : Meters				Meters : Yards		
40	=	36. 58		50	=	54. 68
50	=	45. 72		60	=	65. 62
60	=	54. 86		65	=	71. 08
70	=	64. 01		80	=	87. 49
75	=	68. 58		100	=	109. 36
100	=	91. 44		110	=	120. 30
110	=	100. 58		200	=	218. 72
120	=	109. 73		300	=	328. 08
220	=	201. 17		400	=	437. 44
300	=	274. 32		500	=	546. 81
440	=	402. 34	= ¼ mi	600	=	656. 16
600	=	548. 64		800	=	874. 89
880	=	804. 67	= ½ mi	1 000	=	1 093. 61
1 000	=	914. 40		1 500	=	1 640. 42
1 320	=	1 207. 01	= ¾ mi	1 600	=	1 749. 78

Miles : Meters			Meters : Miles				Yards and inches		Miles (approx.)
1	=	1 609. 3	2 000	=	1		427	8	1. 24
2	=	3 218. 7	2 400	=	1		864	24	1. 49
3	=	4 828. 0	3 000	=	1	1	520	30	1. 86
4	=	6 437. 4	3 200	=	1	1	739	20	1. 99
5	=	8 046. 7	5 000	=	3		188	2	3. 11
6	=	9 656. 1	6 000	=	3	1	281	24	3. 73
7	=	11 265. 4	10 000	=	6		376	4	6. 21
8	=	12 874. 8	15 000	=	9		564	6	9. 32
9	=	14 484. 1	20 000	=	12		752	8	12. 43
10	=	16 093. 5	25 000	=	15		940	10	15. 53
15	=	24 140. 2	30 000	=	18	1	128	12	18. 64
20	=	32 186. 9	50 000	=	31		120	20	31. 07
25	=	40 233. 7							
26 mi and 385 yd	=	42 195. 1							

TABLE 2.—*Field events*

Feet : Meters			Inches : Meter		
1	=	0.305	1	=	0.025
2	=	.610	2	=	.051
3	=	.914	3	=	.076
4	=	1.219	4	=	.102
5	=	1.524	5	=	.127
6	=	1.829	6	=	.152
7	=	2.134	7	=	.178
8	=	2.438	8	=	.203
9	=	2.743	9	=	.229
10	=	3.048	10	=	.254
20	=	6.096	11	=	.279
30	=	9.144	12	=	.305
40	=	12.192			
50	=	15.240	Fractions of an inch : Meter		
60	=	18.288			
70	=	21.336			
80	=	24.384	1/8	=	0.003
90	=	27.432	1/4	=	.006
			3/8	=	.010
100	=	30.480	1/2	=	.013
200	=	60.960			
300	=	91.440	5/8	=	.016
400	=	121.920	3/4	=	.019
500	=	152.400	7/8	=	.022
			1	=	.025
600	=	182.880			
700	=	213.360			
800	=	243.840			
900	=	274.321			

In deciding upon the number of decimal places to be retained in the accompanying tables consideration has been given to the precision of measurement of distance and of time as ordinarily carried out in connection with track and field events.

In field events it is customary to measure distances in feet and inches to the nearest 1/8 inch. This corresponds to about 3 millimeters, or 0.003 meter. In order not to sacrifice accuracy in converting these measured distances to meters the metric equivalents are given to the nearest 0.001 meter. This precision is ample, since the equivalents are more precise than the measurements themselves.

In the case of track events consideration has been given to the precision of measurement of both distance and time as ordinarily carried out in connection with these events. The time measurements are, in general, much the less precise of the two.

Time, when taken with stop watches, is ordinarily given to 1/5 second or to 1/10 second. When taken with electrical timing devices it may be given to 1/100 second.

In the dashes, where 1 second represents a distance of approximately 10 yards or 10 meters, 1/10 second represents roughly 1 yard or 1 meter, and 1/100 second a distance of 1/10 yard or 1/10 meter. Obviously, then, there is no need at present to give metric equivalents of distances more precisely than to the nearest 1/10 meter even when the most precise timing methods are used. For distances less than 1 mile they have, however, been given to the nearest 1/100 meter in order to allow for possible future improvement in timing equipment.

XI. GRAPHIC COMPARISON CHART OF SCREW THREAD PITCHES[a]

The "fineness" of an English screw thread is ordinarily expressed in terms of the number of threads per inch, while in the case of metric threads the same thing is expressed in terms of the distance from one thread to the next, measured parallel to the axis; that is, in terms of the pitch.

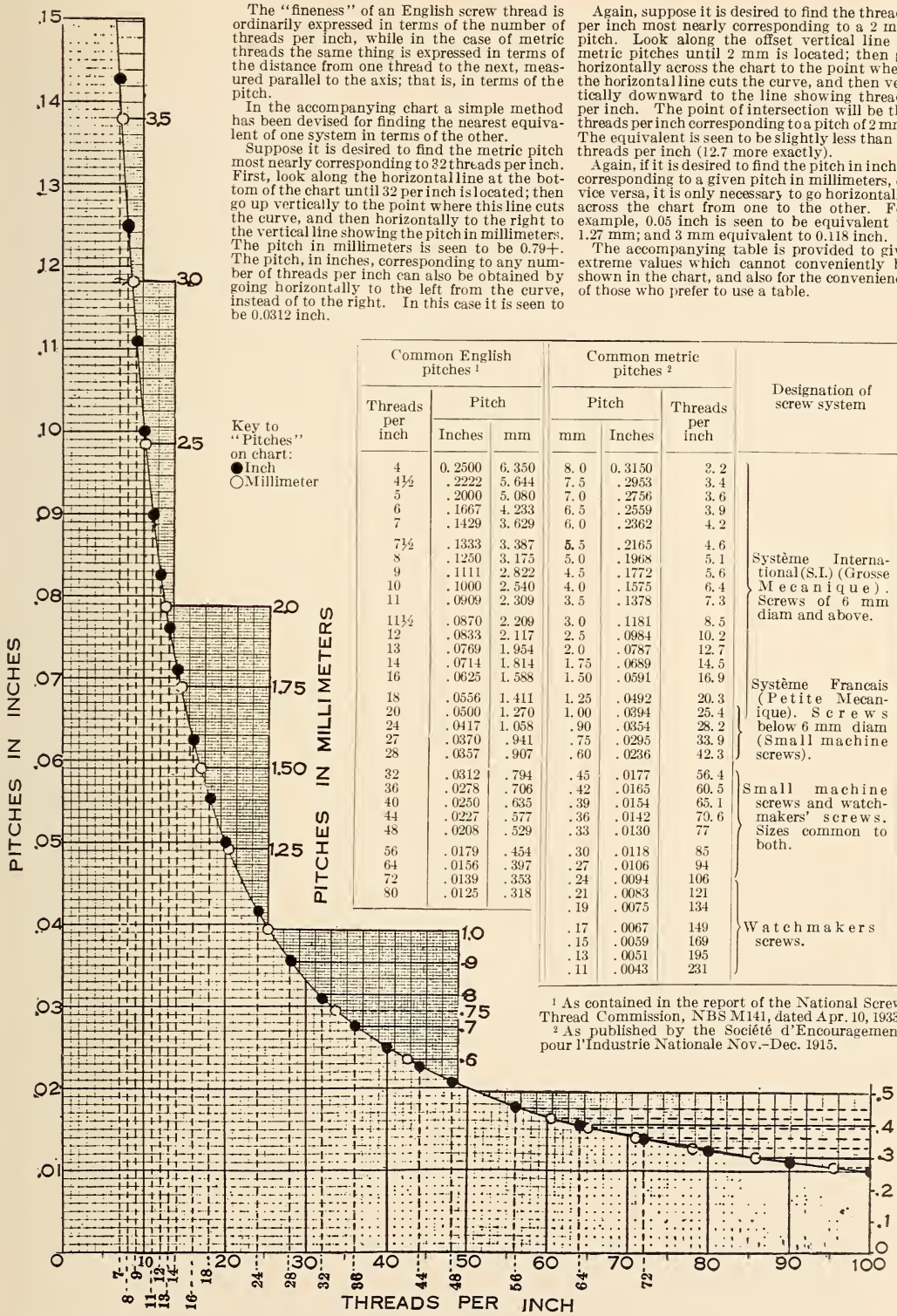
In the accompanying chart a simple method has been devised for finding the nearest equivalent of one system in terms of the other.

Suppose it is desired to find the metric pitch most nearly corresponding to 32 threads per inch. First, look along the horizontal line at the bottom of the chart until 32 per inch is located; then go up vertically to the point where this line cuts the curve, and then horizontally to the right to the vertical line showing the pitch in millimeters. The pitch in millimeters is seen to be 0.79+. The pitch, in inches, corresponding to any number of threads per inch can also be obtained by going horizontally to the left from the curve, instead of to the right. In this case it is seen to be 0.0312 inch.

Again, suppose it is desired to find the threads per inch most nearly corresponding to a 2 mm pitch. Look along the offset vertical line of metric pitches until 2 mm is located; then go horizontally across the chart to the point where the horizontal line cuts the curve, and then vertically downward to the line showing threads per inch. The point of intersection will be the threads per inch corresponding to a pitch of 2 mm. The equivalent is seen to be slightly less than 13 threads per inch (12.7 more exactly).

Again, if it is desired to find the pitch in inches corresponding to a given pitch in millimeters, or vice versa, it is only necessary to go horizontally across the chart from one to the other. For example, 0.05 inch is seen to be equivalent to 1.27 mm; and 3 mm equivalent to 0.118 inch.

The accompanying table is provided to give extreme values which cannot conveniently be shown in the chart, and also for the convenience of those who prefer to use a table.



Common English pitches[1]			Common metric pitches[2]			Designation of screw system
Threads per inch	Pitch		Pitch		Threads per inch	
	Inches	mm	mm	Inches		
4	0.2500	6.350	8.0	0.3150	3.2	Système International (S.I.) (Grosse Mecanique). Screws of 6 mm diam and above.
4½	.2222	5.644	7.5	.2953	3.4	
5	.2000	5.080	7.0	.2756	3.6	
6	.1667	4.233	6.5	.2559	3.9	
7	.1429	3.629	6.0	.2362	4.2	
7½	.1333	3.387	5.5	.2165	4.6	
8	.1250	3.175	5.0	.1968	5.1	
9	.1111	2.822	4.5	.1772	5.6	
10	.1000	2.540	4.0	.1575	6.4	
11	.0909	2.309	3.5	.1378	7.3	
11½	.0870	2.209	3.0	.1181	8.5	
12	.0833	2.117	2.5	.0984	10.2	
13	.0769	1.954	2.0	.0787	12.7	
14	.0714	1.814	1.75	.0689	14.5	
16	.0625	1.588	1.50	.0591	16.9	
18	.0556	1.411	1.25	.0492	20.3	Système Francais (Petite Mecanique). Screws below 6 mm diam (Small machine screws).
20	.0500	1.270	1.00	.0394	25.4	
24	.0417	1.058	.90	.0354	28.2	
27	.0370	.941	.75	.0295	33.9	
28	.0357	.907	.60	.0236	42.3	
32	.0312	.794	.45	.0177	56.4	Small machine screws and watchmakers' screws. Sizes common to both.
36	.0278	.706	.42	.0165	60.5	
40	.0250	.635	.39	.0154	65.1	
44	.0227	.577	.36	.0142	70.6	
48	.0208	.529	.33	.0130	77	
56	.0179	.454	.30	.0118	85	
64	.0156	.397	.27	.0106	94	
72	.0139	.353	.24	.0094	106	
80	.0125	.318	.21	.0083	121	
			.19	.0075	134	
			.17	.0067	149	Watchmakers screws.
			.15	.0059	169	
			.13	.0051	195	
			.11	.0043	231	

[1] As contained in the report of the National Screw Thread Commission, NBS M141, dated Apr. 10, 1933.
[2] As published by the Société d'Encouragement pour l'Industrie Nationale Nov.–Dec. 1915.

Graphic comparison of screw thread pitches, showing the number of threads per inch and pitch in millimeters for both inch and millimeter systems.

[a] The above chart is also printed as a separate Miscellaneous Publication, M49, entitled Graphic Comparison of Screw Thread Pitches, by H. W. Bearce, and may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., Price 5 cents.

XII. STATUS OF INTERNATIONAL METRIC SYSTEM IN THE UNITED STATES

1. CONSTITUTIONAL AUTHORITY TO FIX STANDARDS

"The Congress shall have power to * * * fix the standard of weights and measures." (Constitution of the United States, Art. 1, sec. 8, par. 5.)

2. METRIC SYSTEM LEGALIZED

"It shall be lawful throughout the United States of America to employ the weights and measures of the metric system, * * *." (Revised Statutes of the United States, sec. 3569.)

3. METRIC STANDARDS ADOPTED AS FUNDAMENTAL

"* * * the office of weights and measures * * * will in the future regard the international prototype meter and kilogram as fundamental standards, and the customary units, the yard and the pound, will be derived therefrom in accordance with the act of July 28, 1866." (Order approved by the Secretary of the Treasury, April 5, 1893.)

4. METRIC BALANCES FURNISHED CERTAIN POST OFFICES

"The Postmaster General shall furnish to the post offices exchanging mails with foreign countries, and to such other offices as he may deem expedient, postal balances denominated in grams of the metric system, fifteen grams of which shall be the equivalent, for postal purposes, of one-half ounce avoirdupois, and so on in progression." (Revised Statutes of the United States, sec. 3880.)

5. METRIC WEIGHTS USED FOR CERTAIN COINS

"* * * the weight of the half-dollar shall be twelve grams and one-half of a gram; the quarter-dollar and the dime shall be, respectively, one-half and one-fifth of the weight of said half-dollar." (Revised Statutes of the United States, sec. 3513.)

6. CONGRESS PROVIDES METRIC STANDARDS FOR THE STATES OF THE UNION, LAND-GRANT AGRICULTURAL COLLEGES, AND THE SMITHSONIAN INSTITUTION

"*Be it resolved by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Secretary of the Treasury be, and he is hereby, authorized and directed to furnish to each State, to be delivered to the governor thereof, one set of the standard weights and measures of the metric system for the use of the States, respectively." (Joint resolution of Congress approved July 27, 1866.)

"*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Secretary of the Treasury be, and he is hereby, directed to cause a complete set of all the weights and measures adopted as standards to be delivered to the governor of each State in the Union, for the use of agricultural colleges in the States, respectively, which have received a grant of lands from the United States, and also one set of the same for the use of the Smithsonian Institution: * * *." (Joint resolution of Congress, approved March 3, 1881.)

7. UNITED STATES JOINS IN ESTABLISHING INTERNATIONAL BUREAU OF WEIGHTS AND MEASURES

"The high contracting parties engage to establish and maintain, at their common expense, a scientific and permanent international bureau [11] of weights and measures, the location of which shall be at Paris." (Extract from convention of 1875, signed for the United States by the United States ambassador to France.)

[11] This bureau has the cutody of the international standards of the metric system, to which all metric prototypes of the world are referred for verification. It was established and is maintained jointly by various governments.

8. CONGRESS ADOPTS THE METRIC UNITS FOR ELECTRICAL MEASURES

It was enacted by the Congress that the international electrical units shall be the legal units of electrical measure in the United States. These units were based on the centimeter-gram-second electromagnetic system of electrical units. (See Revised Statutes of the United States, Supplement, vol. 2, chap. 131, 1894.)

9. METRIC SYSTEM REQUIRED IN THE MEDICAL WORK OF THE WAR AND NAVY DEPARTMENTS AND THE U. S. PUBLIC HEALTH SERVICE OF THE TREASURY DEPARTMENT

(*a*) "Pharmacy management. * * *

"(*b*) Records.

"1. In time of peace and, so far as practicable, in time of war all prescriptions will be written in the metric system. * * *." (Army Regulations, 1929, Regulation 40–590, par. 18, sub.-par. 18–b (1).)

(*b*) "The metric system of weights and measures shall hereafter be employed in the Medical Department of the Navy." (Order approved by the Secretary of the Navy, April 15, 1878.)[12]

(*c*) "Officers shall, for all official, medical, and pharmacal purposes, make use of the metric system of weights and measures." (Regulations of the U. S. Public Health Service, 1931, sec. 856.)

10. METRIC CARAT ADOPTED AS UNIT OF WEIGHT FOR DIAMONDS AND OTHER PRECIOUS STONES

"Beginning July 1, 1913, the Bureau of Standards will recognize the international metric carat of 200 milligrams as the unit of weight for diamonds and other precious stones and will use this unit for the purposes of certification of all carat weights submitted to the bureau for test." (National Bureau of Standards, Circular C43, issued November 1, 1913.)

"On and after July 1, 1913, the unit of weight for imported diamonds, pearls, and other precious stones will be the metric carat of 200 milligrams.

"Collectors at ports now equipped with scales for weighing precious stones will make requisition for a new set of weights based upon such carat." (Treasury Department order, June 17, 1913, to collectors and other officers of the customs.)

11. METRIC SYSTEM OPTIONAL IN PUERTO RICO

"SECTION 1.—That the metric system of weights and measures and the imperial system customarily used in the United States, insofar as the same is described by this act, are hereby recognized and established in Porto Rico for use in all industrial and commercial transactions, * * *."

(Act No. 135, approved, August 18, 1913.)

12. METRIC SYSTEM MADE THE LEGAL SYSTEM IN THE PHILIPPINE ISLANDS

"The weights and measures to be used throughout the Philippine Islands are those of the metric system, with the following units: * * *

"The metric system of weights and measures, with its recognized scales, shall be used in all contracts, deeds, and other instruments publicly and officially attested, and in all official documents; and, except as hereinbelow provided, only weights and measures of the metric system shall be officially sealed and licensed.

"In the purchase and sale of manufactured lumber the English system of measures may be employed; and in ordering commodities or articles from abroad such

[12] The metric system is now used exclusively only in the medical prescription work of the Bureau of Medicine and Surgery.

weights and measures may be employed as are commonly used in the country to which the order is sent or from which the goods are shipped." (Administrative Code, 1917, vol. 2, Art. IX, p. 8, secs. 32 and 33.)

13. RELATION BETWEEN INCHES AND MILLIMETERS ADOPTED BY AMERICAN STANDARDS ASSOCIATION

For industrial purposes a simple relation between the inch and the millimeter has been adopted by the American Standards Association (ASA B48.1–1933), and by similar organizations in 15 other countries. This relation is

1 inch=25.4 millimeters (exactly)
from which, 1 yard=0.9144 meter (exactly).

The adoption of this relation by industry, for use in making conversions between inches and millimeters, has no effect upon the legal definition of the yard or of the meter.

14. DISTANCES IN MULTIPLES OF METRIC UNITS ADOPTED FOR AMATEUR ATHLETIC UNION TRACK EVENTS

On November 22, 1932, the Amateur Athletic Union took official action adopting metric distances for track events to be run in athletic meets held under the jurisdiction of that body. These metric distances given in this publication are also given in Letter Circular LC376, which may be obtained from the National Bureau of Standards.

XIII. INDEX

	Page
Abbreviations, list of accepted	7
Acre:	
Definition	4
Equivalents in hectares, 1 to 9 units	12
Equivalents in hectares, 1 to 999 units	36
Equivalents of bushels per acre in hectoliters per hectare, 1 to 9 units	13
Relation to other area units	8
Amateur Athletic Union:	
Metric distances for track events	60
American Standards Association:	
Conversion factor, inches to millimeters	65
Angstrom	3
Apothecaries' units (*see also* under the name of each unit)	5
Are, definition	4
Area:	
Definition of units	3
Fundamental units	3
Subsidiary units	3
Athletic events, track distances in meters	60
Avoirdupois units of mass (*see also* under the name of each unit)	5
Barrel:	
For apples:	
Definition	5
Volume in cubic inches	5
Board foot, definition	4
Bureau, International, of Weights and Measures	63
Bushel:	
British:	
Relation to United States bushel, approximate	2
United States:	
Definition	4
Equivalents in hectoliters, 1 to 9 units	13
Equivalents in hectoliters, 1 to 999 units	52
Heaped	4
Relation to other capacity units	10
Stricken or struck	4
Volume in cubic inches	2
Capacity:	
Definition of units	4
Fundamental units	4
Subsidiary units	4
Capacity measures:	
Coefficient of expansion	6
Distinction between, and units	6
Material of which made	6
Temperature at which standard	6
Carat:	
Metric, definition	5
Old, in use in United States previous to July 1, 1913	5
Centare, definition	4
Centigram, definition	5
Centiliter, definition	4
Centimeter:	
Cubic:	
Definition	4
Equivalents in cubic inches, 1 to 9 units	12
Relation to other volume units	8
Definition	3
Relation to other units	8
Square:	
Definition	4
Equivalents in square inches, 1 to 9 units	12
Relation to other area units	8
Chain (Gunter's):	
Definition	3
Relation to other length units	8
Square:	
Definition	4
Relation to other area units	8
Common fractions of an inch in decimals of an inch and millimeters	15
Comparison of pounds and tons used in United States	14
Comparison of screw thread pitches:	
English and metric	Facing 62
Contents, table	III
Conversion factor, ASA:	
Inches to millimeters	65
Cord, definition	4
Cubic measure, units (*see also* under the name of each unit)	4
Customary standards of length, temperature at which standard	6
Decigram, definition	5
Deciliter, definition	4
Decimal and common fractions of an inch and millimeters	15
Decimeter:	
Cubic:	
Definition	4
Relation to liter	4
Relation to other volume units	8
Definition	3
Equivalent in inches	2
Square, definition	4
Dekagram, definition	5
Dekaliter:	
Definition	4
Equivalents in United States pecks, 1 to 9 units	13
Relation to other capacity units	10
Dekameter:	
Cubic, definition	4
Definition	3
Square, definition	4
Dram:	
Apothecaries':	
Definition	5
Equivalents in grams, 1 to 9 units	13
Relation to other units of mass	10
Avoirdupois:	
Definition	5
Relation to other units of mass	10
Fluid:	
Definition	5
Equivalents in milliliters, 1 to 9 units	13
Relation to other capacity units	8
Dry units of capacity (*see also* under the name of each unit)	4
Electrical units, based on metric system	64
Equivalents, fundamental	2
Equivalents. (*See* names of units.)	
Fathom, definition	3
Feet. (*See* Foot.)	
Fluid units (*see also* under the name of each unit)	4
Foot:	
Cubic:	
Definition	4
Equivalents in cubic meters, 1 to 9 units	12
Equivalents in liters, 1 to 9 units	12
Relation to other volume units	8
Definition	3
Equivalents in meters, 1 to 9 units	12
Equivalents in meters, 1 to 999 units	28
Relation to other length units	8
Square:	
Definition	4
Equivalents in square meters, 1 to 9 units	12
Relation to other area units	8
Fractions of an inch and millimeters	15
Furlong, definition	3
Gallon:	
British imperial:	
Relation to United States gallon, approximate	2
United States:	
Definition	4
Equivalents in liters 1 to 9 units	13
Equivalents in liters 1 to 999 units	48
Relation to other capacity units	8
Volume in cubic inches	4
Geographical mile. (*See* Mile, geographical.)	

	Page
Gill:	
Definition	5
Relation to other capacity units	8
Volume in cubic inches	5
Grain:	
Definition	5
Equivalents in grams, 1 to 9 units	13
Relation to other units of mass	10
Gram:	
Definition	5
Equivalents in grains, 1 to 9 units	13
Equivalents in apothecaries' drams, 1 to 9 units	13
Equivalents in troy ounces, 1 to 9 units	13
Equivalents in avoirdupois ounces, 1 to 9 units	13
Relation to other units of mass	10
Weights of certain coins in grams	63
Graphic chart of screw thread pitches	Facing 62
Hand, definition	3
Hectare:	
Definition	3
Equivalents in acres, 1 to 9 units	12
Equivalents in acres, 1 to 999 units	38
Relation to other area units	8
Hectogram, definition	5
Hectoliter:	
Definition	4
Equivalents in United States bushels, 1 to 9 units	13
Equivalents, 1 to 9 units:	
Of hectoliters per hectare in United States bushels per acre	13
Equivalents of hectoliters per hectare in bushels per acre, 1 to 9 units	13
Hectometer:	
Cubic definition	4
Definition	3
Square, definition	3
Hundredths of an inch, equivalents of, in millimeters	15
Hundredweight:	
Long, definition	5
Short:	
Definition	5
Relation to other units of mass	10
Inch:	
Definition	3
Equivalents in millimeters, 1 to 9 units	12
Equivalents of common fractions of, in decimals of an inch	15
Equivalents of common fractions of, in millimeters	15
Equivalents in hundredths of an inch, in millimeters	15
Equivalents in meters, 1 to 12 units	29
Relation to other length units	8
Cubic:	
Definition	4
Equivalents in cubic centimeters, 1 to 9 units	12
Equivalents in liters, 1 to 9 units	12
Number in gallon	4
Number in bushel	4
Relation to dry capacity units	10
Relation to liquid capacity units	8
Relation to other volume units	8
Square:	
Definition	4
Equivalents in square centimeters, 1 to 9 units	12
Relation to other area units	8
International Bureau of Weights and Measures	63
Interrelation of units	8
Introduction	1
Kilogram:	
Definition	5
Equivalents in avoirdupois pounds, 1 to 9 units	13
Equivalents in avoirdupois pounds, 1 to 999 units	58
Equivalents in avoirdupois and troy pounds, short and long tons, and metric tons, 1 to 9 units	14
Relation to other units of mass	10
Kilometer:	
Cubic, definition	4
Definition	3
Equivalents in statute miles, 1 to 9 units	12
Equivalents in statute miles, 1 to 999 units	34
Square:	
Definition	3
Equivalents in square miles, 1 to 9 units	12
Law:	
Equivalent of half ounce in grams for use in post offices	63
Electrical units based on metric system	64
Law—Continued.	Page
July 28, 1866, legalizing use of metric system	63
Metric system in Puerto Rico	64
Metric system in Philippine Islands	64
Weights of certain coins in grams fixed by law	63
Legal status of metric system in United States	63
Length:	
Cable. (*See* Cable length.)	
Definition of units	3
Fundamental units	3
Subsidiary units	3
Link:	
Definition	3
Relation to other length units	8
Square:	
Definition	4
Relation to other area units	8
Liquid units (*see also* under the name of each unit)	4
Liquids:	
Sale of, by measure	6
Temperature of density determinations	6
Liter:	
Definition	4
Equivalents in cubic inches, 1 to 9 units	12
In cubic feet, 1 to 9 units	12
In United States dry quarts, 1 to 9 units	13
In United States dry pecks, 1 to 9 units	13
In United States liquid pints, 1 to 9 units	13
In United States liquid quarts, 1 to 9 units	13
In United States gallons, 1 to 9 units	13
In United States liquid quarts, 1 to 999 units	46
In United States gallons, 1 to 999 units	50
Relation to cubic decimeter	4
to other liquid capacity units	8
to other dry capacity units	10
Long hundredweight. *See* Hundredweight, long.	
Long ton. (*See* Ton, long.)	
Mass:	
Definition of units	5
Fundamental units	5
Subsidiary units	5
Mendenhall Order	1
Meter:	
Cubic:	
Definition	4
Equivalents in cubic feet, 1 to 9 units	12
Equivalents in cubic yards, 1 to 9 units	12
Equivalents in cubic yards, 1 to 999 units	42
Relation to other volume units	8
Definition	3
Equivalents in feet, 1 to 9 units	12
Equivalents in feet, 1 to 999 units	30
Equivalents in rods, 1 to 9 units	12
Equivalents in yards, 1 to 9 units	12
Legal equivalent in inches	2
Relation to other length units	8
Square:	
Definition	3
Equivalents in square feet, 1 to 9 units	12
Equivalents in square yards, 1 to 9 units	12
Relation to other area units	8
Metric standards of length, temperature at which standard	6
Metric system:	
Abbreviations	6
Legalized	63
Prefixes	1
Statement of legal status	63
Units	1
Use in coinage	63
Use in medical work of War Department	64
Use in medical work of Navy Department	64
Use in Philippine Islands	64
Use in Puerto Rico	64
Use in U. S. Public Health Service	64
Metric ton. (*See* Ton, metric.)	
Micron, definition	3
Mile:	
Geographical, definition	3
Nautical:	
Definition	3
Square:	
Definition	4
Equivalents in square kilometers, 1 to 9 units	12
Relation to other area units	8
Statute:	
Definition	3
Equivalents in kilometers, 1 to 9 units	12
Equivalents in kilometers, 1 to 999 units	32
Relation to other length units	8

	Page
Milligram:	
Definition	5
Relation to other units of mass	10
Milliliter:	
Definition	5
Equivalent in cubic centimeters	5
Equivalents in apothecaries' drams, 1 to 9 units	13
Equivalents in fluid ounces, 1 to 9 units	13
Relation to other capacity units	8
Millimeter:	
Cubic, definition	4
Definition	3
Equivalents in inches, 1 to 9 units	12
Equivalents in inches, 1 to 99 units	15
Square, definition	4
Millimicron, definition	3
Minim:	
Definition	5
Relation to other capacity units	8
Nautical mile. (*See* Mile, nautical.)	
Ounce:	
Apothecaries', definition	5
Avoirdupois:	
Definition	5
Equivalents in grams, 1 to 9 units	13
Relation to other units of mass	10
Fluid:	
Definition	5
Equivalents in milliliters, 1 to 9 units	13
Relation to other capacity units	8
Troy:	
Definition	5
Equivalents in grams, 1 to 9 units	13
Relation to other units of mass	10
Peck:	
Definition	5
Equivalents in liters, 1 to 9 units	13
Equivalents in dekaliters, 1 to 9 units	13
Relation to other capacity units	10
Volume in cubic inches	5
Pennyweight:	
Definition	5
Relation to other units of mass	10
Pint:	
Dry:	
Definition	5
Relation to other capacity units	10
Volume in cubic inches	5
Liquid:	
Definition	5
Equivalents in liters, 1 to 9 units	13
Relation to other capacity units	8
Volume in cubic inches	5
Pitches, screw thread, English and metric	Facing 62
Point, definition	3
Post office, equivalent of half ounce in usage	63
Pound:	
Apothecaries':	
Definition	5
Relation to other units of mass	10
Avoirdupois:	
Definition	5
Equivalents in kilograms, 1 to 9 units	13
Equivalents in kilograms, 1 to 999 units	56
Equivalents in troy pounds, kilograms, short and long tons, and metric tons, 1 to 9 units	14
Fundamental equivalent	5
Relation to other units of mass	10
Troy:	
Definition	5
Equivalents in avoirdupois pounds, kilograms, short and long tons, and metric tons, 1 to 9 units	14
Relation to other units of mass	10
Quart:	
Dry:	
Definition	5
Equivalents in liters, 1 to 9 units	13
Relation to other capacity units	10
Volume in cubic inches	5
Liquid:	
Definition	5
Equivalents in liters, 1 to 9 units	13
Equivalents in liters, 1 to 999 units	44
Relation to other capacity units	8
Volume in cubic inches	5

	Page
Reduction factors (*see also* separate tables)	1
Rod:	
Definition	3
Equivalents in meters, 1 to 9 units	12
Relation to other length units	8
Rod, square:	
Definition	4
Relation to other area units	8
Screw threads, comparison of pitches, English and metric	Facing 62
Scruple, apothecaries':	
Definition	5
Relation to other units of mass	10
Short hundredweight. (*See* Hundredweight, short.)	
Short ton. (*See* Ton, short.)	
Span, definition	3
Spelling of units	6
Square measure:	
Abbreviation	6
Units	3
See also under the name of each unit.	
Standards, metric, furnished to each State	63
Standards of measurement:	
Coefficient of expansion	6
Congress has power to fix, in Constitution	63
Density of, for weights	6
Distinction between, and units	5
Temperature of	6
Status of metric system in United States	63
Statute mile. (*See* Mile, statute.)	
Stere, definition	4
Tables of equivalents:	
Method of construction	1
Method of use	1
Tapes:	
Method of support	6
Temperature at which standard	6
Tension	6
Ton:	
Long:	
Definition	5
Equivalents in troy and avoirdupois pounds, kilograms, short tons, and metric tons, 1 to 9 units	14
Relation to other units of mass	10
Short:	
Definition	5
Equivalents in troy and avoirdupois pounds, kilograms, long tons, and metric tons, 1 to 9 units	14
Relation to other units of mass	10
Troy units of mass (*see also* under the name of each unit)	5
Units:	
Abbreviations	6
Definitions	3
Spelling	6
Table of metric	1
Volume:	
Abbreviation of units	6
Definition of units	4
Fundamental units	4
Subsidiary units	4
Weights of certain coins in grams	63
Weights:	
Buoyancy	6
Density	6
Material	6
Weights and Measures, International Bureau	63
Yard:	
Cubic:	
Definition	4
Equivalents in cubic meters, 1 to 9 units	12
Equivalents in cubic meters, 1 to 999 units	40
Relation to other volume units	8
Definition	3
Equivalents in meters, 1 to 9 units	12
Legal equivalents	1
Relation to other length units	8
Square:	
Definition	3
Equivalents in square meters, 1 to 9 units	12
Relation to other area units	8