

## Appendix A

### Common and scientific names of fishes

The colloquial names of many fish species have been standardized in Common and Scientific Names of Fishes from the United States and Canada (5th edition, 1990), published by the American Fisheries Society. Throughout this book, species listed in those publications are cited only by common name except when a fuller identification is important. The respective scientific names of these species follow.

Black bass	<i>Micropterus spp.</i>
Black bullhead	<i>Ameiurus melas</i>
Bluegill	<i>Lepomis macrochirus</i>
Brook stickleback	<i>Culaea inconstans</i>
Bullhead	<i>Ameiurus spp.</i>
Channel catfish	<i>Ictalurus punctatus</i>
Chinook salmon	<i>Oncorhynchus tshawytscha</i>
Common carp	<i>Cyprinus carpio</i>
Fathead minnow	<i>Pimephales promelas</i>
Finescale dace	<i>Phoxinus neogaeus</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Golden shiner	<i>Notemigonus crysoleucas</i>
Goldfish	<i>Carassius auratus</i>
Grass carp	<i>Ctenopharyngodon idella</i>
Hybrid striped bass (white bass x striped bass) (striped bass x white bass)	<i>Morone Chrysops x M. saxatilis</i> <i>Morone saxatilis x M. Chrysops</i>
Largemouth Bass	<i>Micropterus salmoides</i>
Muskellunge	<i>Esox masquinongy</i>
Northern pike	<i>Esox lucius</i>
Paddlefish	<i>Polyodon spathula</i>
Pearl dace	<i>Margariscus margarita</i>
Pickerel	<i>Esox spp.</i>
Rainbow trout	<i>Oncorhynchus mykiss</i>
Sauger	<i>Stizostedion canadense</i>
Saugeye (walleye x sauger)	<i>Stizostedion vitreum x S. canadense</i>
Striped bass	<i>Morone saxatilis</i>
Suckers	<i>Catostomidae</i>
Sunfish	<i>Lepomis spp.</i>
Tiger muskellunge (muskellunge x northern pike)	<i>Esox masquinongy x E. lucius</i>
Tilapia	<i>Oreochromis, Sarotherodon, and Tilapia</i>
Walleye	<i>Stizostedion vitreum</i>
White bass	<i>Morone Chrysops</i>
Yellow perch	<i>Perca flavescens</i>

## **Appendix A**

## Appendix B

# English – Metric (Conversions and Mathematical Formulas)

Where approximate or nominal English units are used to express a value or range of values, the converted metric units in parentheses are also approximate or nominal. Where precise English units are used, the converted metric units are expressed as equally significant values. The publication by Moore and Mitchell (1987) is a valuable booklet on conversions useful in aquaculture. Moore, B.R., and A.J. Mitchell. 1987. Conversions useful in fish culture and fishery research and management. Fish and Wildlife Leaflet 10. The publication is available from the U.S. Fish and Wildlife Service, Matomic Building, Room 148, Washington, DC 20240.

**Table 1. Quantities and units of space.**

Multiply	By	To obtain
<b>Length</b>		
Inches (in)	25.4 (exactly)	Millimeters (mm)
Inches (in)	2.54 (exactly)	Centimeters (cm)
Feet (ft)	30.48 (exactly)	Centimeters (cm)
Feet (ft)	0.3048 (exactly)	Meters (m)
Yards (yd)	0.9144 (exactly)	Meters (m)
Miles (statute) (mi)	1,609.3	Meters (m)
Miles (mi)	1.61	Kilometers (km)
<b>Area</b>		
Square inches ( $\text{in}^2$ )	6.4516 (exactly)	Square centimeters ( $\text{cm}^2$ )
Square feet ( $\text{ft}^2$ )	929.03	Square centimeters ( $\text{cm}^2$ )
Square feet ( $\text{ft}^2$ )	0.0929	Square meters ( $\text{m}^2$ )
Square yards ( $\text{yd}^2$ )	0.836	Square meters ( $\text{m}^2$ )
Acres (A)	0.4047	Hectares (ha)
Acres (A)	4,046.9	Square meters ( $\text{m}^2$ )
Acres (A)	0.004047	Square kilometers ( $\text{km}^2$ )
Square miles ( $\text{mi}^2$ )	2.590	Square kilometers ( $\text{km}^2$ )
<b>Volume</b>		
Cubic inches ( $\text{in}^3$ )	16.3872	Cubic centimeters ( $\text{cm}^3$ )
Cubic feet ( $\text{ft}^3$ )	0.0283	Cubic meters ( $\text{m}^3$ )
Cubic yards ( $\text{yd}^3$ )	0.76456	Cubic meters ( $\text{m}^3$ )
<b>Capacity</b>		
Fluid ounces (U.S.) (fl oz)	29.573	Cubic centimeters ( $\text{cm}^3$ )
Fluid ounces (U.S.) (fl oz)	29.573	Milliliters (mL)
Liquid pints (U.S.) (pt)	0.473	Liters (L)
Quarts (U.S.) (qt)	946.34	Cubic centimeters ( $\text{cm}^3$ )
Quarts (U.S.) (qt)	0.946	Liters (L)
Gallons (U.S.) (gal)	3,785.4	Cubic centimeters ( $\text{cm}^3$ )
Gallons (U.S.) (gal)	3.7854	Liters (L)
Gallons (U.S.) (gal)	0.00379	Cubic meters ( $\text{m}^3$ )
Gallons (U.K.) (gal)	4.545	Liters (L)
Cubic feet ( $\text{ft}^3$ )	28.317	Liters (L)
Cubic yards ( $\text{yd}^3$ )	764.559	Liters (L)
Acre-feet (A-ft)	1,233.49	Cubic meters ( $\text{m}^3$ )
Acre-feet (A-ft)	1,233,500.0	Liters (L)

## Appendix B

**Table 2. Quantities and units of mechanics.**

Multiply	By	To obtain
<b>Mass</b>		
Grains (1/7,000 lb)	64.8	Milligrams (mg)
Troy ounces (480grains) (oz tr)	31.103	Grams (g)
Ounces (avdp) (oz)	28.3495	Grams (g)
Pounds (avdp) (lb)	0.454	Kilograms (kg)
Short tons (2,000lb)	907.184	Kilograms (kg)
Short tons (2,000lb)	0.907	Metric tons (t)
Long tons (2,240lb)	1,016.05	Kilograms (kg)
<b>Force/Area</b>		
Pounds per square inch (lb/in <sup>2</sup> )	0.070307	Kilograms per square centimeter (kg/cm <sup>2</sup> )
Pounds per square foot (lb/ft <sup>2</sup> )	4.88243	Kilograms per square meter (kg/m <sup>2</sup> )
<b>Mass/Volume (Density)</b>		
Pounds per cubic foot	16.0185	Kilograms per cubic meter
Pounds per cubic foot	0.0160185	Grams per cubic centimeter
<b>Mass/Capacity</b>		
Ounces per gallon (U.S.)	7.4626	Grams per liter
Pounds per gallon (U.S.)	119.83	Grams per liter
<b>Bending Moment or Torque</b>		
Foot-pounds	0.1383	Kilograms-Meter
Foot-pounds	1.356 x 10 <sup>7</sup>	Centimeter-dynes
Foot-pounds per inch	5.4431	Centimeter-kilograms per centimeter
<b>Velocity</b>		
Feet per second (ft/sec)	30.48(exactly)	Centimeters per second (cm/sec)
Feet per second (ft/sec)	0.3048(exactly)	Meters per second (m/sec)
Miles per hour (m/h)	1.609	Kilometers per hour (km/h)
Miles per hour (m/h)	0.44704(exactly)	Meters per second (m/sec)
<b>Acceleration</b>		
Feet per second	0.3048	Meters per second
<b>Flow</b>		
Cubic feet per second (second-feet) (ft <sup>3</sup> /sec)	0.02837	Cubic meters per second (m <sup>3</sup> /sec)
Cubic feet per minute (ft <sup>3</sup> /min)	0.4719	Liters per second (Usec)
Gallons (U.S.) per minute (g/m)	0.06309	Liters per second (Usec)
<b>Force</b>		
Pounds (lb)	0.454	Kilograms (kg)
Pounds (lb)	4.4482x 10 <sup>5</sup>	Dynes
<b>Work and Energy</b>		
British thermal units (Btu)	0.252	Kilogram calories
British thermal units (Btu)	1,054	Joules
<b>Power</b>		
Horsepower	745.700	Watts
Btu per hour	0.293071	Watts
Foot-pounds per second	1.35582	Watts
<b>Other</b>		
Kilograms per hectare (kg/ha)	0.892	Pounds per acre (lb/A)
Pounds per acre (lb/A)	1.121	Kilograms per hectare (kg/ha)
Kilograms per cubic meter (kg/m <sup>3</sup> )	0.06243	Pounds per cubic foot (lb/ft <sup>3</sup> )

**Table 3. Quantities and some equivalent values.**

Quantity	Equivalent Values
<b>Mass</b>	1 lb = 0.4536 kg = $5 \times 10^{-4}$ ton = 453.6 g = 16 oz 1 kg = 2.20462 lb = 1000 g = 0.001 metric ton = 35.2739 oz 1 ton = 1 short ton = 2,000 lb 1 long ton = 2,240 lb 1 oz = 437.5 grains = 166 drams = 28.35 g
<b>Length</b>	1 ft = 12 in = 1/3 yd = 0.3048 m = 30.48 cm = 304.8 mm = 0.06061 rod 1 m = 100 cm = 1,000 mm = $10^6$ microns ( $\mu$ ) = $10^{10}$ angstroms ( $\text{\AA}$ ) 1 m = 39.37 in = 3.2808 ft = 1.0936 yd = 0.0006214 mile 1 mile = 5,280 ft = 320 rods = 1,609 m = 1.609 km 1 mil = 0.001 in
<b>Area</b>	1 in <sup>2</sup> = 6.4516 cm <sup>2</sup> 1 ft <sup>2</sup> = 929.0 cm <sup>2</sup> = 0.09290 m <sup>2</sup> = 1/9 yd <sup>2</sup> 1 m <sup>2</sup> = 100,00 cm <sup>2</sup> = 0.0002471 acre 1 acre = 43,560 ft <sup>2</sup> = 160 rod <sup>2</sup> = 4,047 m <sup>2</sup> = 0.00156 mile <sup>2</sup> 1 section = 1 mile <sup>2</sup> = 640 acres
<b>Volume</b>	1 ft <sup>3</sup> = 7.4805 gallons = 1,728 in <sup>3</sup> = 0.02832 m <sup>3</sup> = 28.32 liters = 28,317 cm <sup>3</sup> 1 m <sup>3</sup> = 1,000 liters = $10^6$ cm <sup>3</sup> = $10^6$ ml = 1.308 yd <sup>3</sup> 1 m <sup>3</sup> = 35.31 ft <sup>3</sup> = 220.83 imperial gallons = 264.17 gallons = 1056.7 quarts 1 gallon = 4 quarts = 8 pints = 32 gills = 3.785 liter = 3,785 cm <sup>3</sup> = 0.003785 m <sup>3</sup> 1 liter = 0.001 m <sup>3</sup> = 1,000 cm <sup>3</sup> = 1,000 ml = 0.2642 gallon = 1.0568 quarts
<b>Force</b>	1 pound force (lb <sub>f</sub> ) = 32.174 lb·ft/s <sup>2</sup> = 4.4482 Newton = $4.4482 \times 10^5$ dynes 1 Newton (N) = 1 kg m/s <sup>2</sup> = $10^5$ dynes = $10^5$ g·cm/s <sup>2</sup>
<b>Pressure</b>	1 atm = 14.696 lb <sub>f</sub> /in <sup>2</sup> (psi) = 33.9 ft H <sub>2</sub> O @ 4°C = 1,033 cm H <sub>2</sub> O @ 4°C 1 atm = 760 mm Hg @ 0°C (torr) = 29.921 in Hg @ 0°C 1 atm = 10.33 m H <sub>2</sub> O @ 4°C = 406.8 in H <sub>2</sub> O @ 4°C = 33.90 ft H <sub>2</sub> O @ 4°C 1 atm = $1.01325 \times 10^5$ N/m <sup>2</sup> (Pascal = Pa) = 1.01325 bars 1 atm = $1.01325 \times 10^6$ dynes/cm <sup>2</sup> 1 lb <sub>f</sub> /in <sup>2</sup> (psi) = 2.307 ft H <sub>2</sub> O @ 4°C = 2.036 in Hg @ 0°C
<b>Density</b>	1 lb/ft <sup>3</sup> = 0.1337 lb/gallon = 0.0135 ton/yd <sup>3</sup> = 16.02 kg/m <sup>3</sup> = 16.02 g/liter 1 kg/m <sup>3</sup> = 1 g/liter = 0.001 g/cm <sup>3</sup> = 0.0005781 oz/in <sup>3</sup>
<b>Energy</b>	1 ft-lb <sub>f</sub> = 1.356 Joule (J) = 0.001286 BTU = $3.766 \times 10^{-7}$ kW·hr = 0.3240 cal 1 J = 1 N·m = $10^7$ ergs = $10^7$ dyne·cm = $2.778 \times 10^{-7}$ kW·hr = 0.2390 cal
<b>Power</b>	1 hp = 745.7 Watt (W) = 178.2 cal/s = 550.0 ft-lb/s = 0.7074 BTU/s 1 W = 1 J/s = 0.2390 cal/s = 0.7376 ft-lb/s = $9.486 \times 10^{-4}$ BTU/s
<b>Velocity</b>	1 ft/s = 0.6818 miles/hr = 30.48 cm/s = 0.3048 m/s = 1.097 km/hr 1 cm/s = 0.01 m/s = 0.01 m <sup>3</sup> /s/m <sup>2</sup> = 14.7 gpm/ft <sup>2</sup>
<b>Acceleration</b>	1 ft/s <sup>2</sup> = 0.3048 m/s <sup>2</sup>
<b>Flow</b>	1 ft <sup>3</sup> /s (cfs) = 0.02832 m <sup>3</sup> /s = 448.8 gallons/min (gpm) = 1,699 liter/min (lpm) 1 cfs = 0.646 million gallons per day (mgd)

## Appendix B

**Table 4. Useful geometry formulas.**

Surface of a sphere	$4\pi r^2$
Volume of a sphere	$\frac{4}{3}\pi r^3$
Area of a circle	$\pi r^2$
Volume of a cylinder	$\pi r^2 \times \text{height}$
Circumference	
known diameter	$\pi d$ or $2\pi r$
known area	$2\sqrt{\pi A}$

A = area

r = radius

$\pi = 3.1416$

**Table 5. Temperature: Celsius to Fahrenheit (to nearest 0.1°F).**

°C	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
0	32.0	32.2	32.4	32.5	32.7	32.9	33.1	33.3	33.4	33.6
1	33.8	34.0	34.2	34.3	34.5	34.7	34.9	35.1	35.2	35.4
2	35.6	35.8	36.0	36.1	36.3	36.5	36.7	36.9	37.0	37.2
3	37.4	37.6	37.8	37.9	38.1	38.3	38.5	38.7	38.8	39.0
4	39.2	39.4	39.6	39.7	39.9	40.1	40.3	40.5	40.6	40.8
5	41.0	41.2	41.4	41.5	41.7	41.9	42.1	42.3	42.4	42.6
6	42.8	43.0	43.2	43.3	43.5	43.7	43.9	44.1	44.2	44.4
7	44.6	44.8	45.0	45.1	45.3	45.5	45.7	45.9	46.0	46.2
8	46.4	46.6	46.8	46.9	47.1	47.3	47.5	47.7	47.8	48.0
9	48.2	48.4	48.6	48.7	48.9	49.1	49.3	49.5	49.6	49.8
10	50.0	50.2	50.4	50.5	50.7	50.9	51.1	51.3	51.4	51.6
11	51.8	52.0	52.2	52.3	52.5	52.7	52.9	53.1	53.2	53.4
12	53.6	53.8	54.0	54.1	54.3	54.5	54.7	54.9	55.0	55.2
13	55.4	55.6	55.8	55.9	56.1	56.3	56.5	56.7	56.8	57.0
14	57.2	57.4	57.6	57.7	57.9	58.1	58.3	58.5	58.6	58.8
15	59.0	59.2	59.4	59.5	59.7	59.9	60.1	60.3	60.4	60.6
16	60.8	61.0	61.2	61.3	61.5	61.7	61.9	62.1	62.2	62.4
17	62.6	62.8	63.0	63.1	63.3	63.5	63.7	63.9	64.0	64.2
18	64.4	64.6	64.8	64.9	65.1	65.3	65.5	65.7	65.8	66.0
19	66.2	66.4	66.6	66.7	66.9	67.1	67.3	67.5	67.6	67.8
20	68.0	68.2	68.4	68.5	68.7	68.9	69.1	69.3	69.4	69.6
21	69.8	70.0	70.2	70.3	70.5	70.7	70.9	71.1	71.2	71.4
22	71.6	71.8	72.0	72.1	72.3	72.5	72.7	72.9	73.0	73.2
23	73.4	73.6	73.8	73.9	74.1	74.3	74.5	74.7	74.8	75.0
24	75.2	75.4	75.6	75.7	75.9	76.1	76.3	76.5	76.6	76.8
25	77.0	77.2	77.4	77.5	77.7	77.9	78.1	78.3	78.4	78.6
26	78.8	79.0	79.2	79.3	79.5	79.7	79.9	80.1	80.2	80.4
27	80.6	80.8	81.0	81.1	81.3	81.5	81.7	81.9	82.0	82.2
28	82.4	82.6	82.8	82.9	83.1	83.3	83.5	83.7	83.8	84.0
29	84.2	84.4	84.6	84.7	84.9	85.1	85.3	85.5	85.6	85.8
30	86.0	86.2	86.4	86.5	86.7	86.9	87.1	87.3	87.4	87.6
31	87.8	88.0	88.2	88.3	88.5	88.7	88.9	89.1	89.2	89.4
32	89.6	89.8	90.0	90.1	90.3	90.5	90.7	90.9	91.0	91.2
33	91.4	91.6	91.8	91.9	92.1	92.3	92.5	92.7	92.8	93.0
34	93.2	93.4	93.6	93.7	93.9	94.1	94.3	94.5	94.6	94.8
35	95.0	95.2	95.4	95.5	95.7	95.9	96.1	96.3	96.4	96.6
36	96.8	97.0	97.2	97.3	97.5	97.7	97.9	98.1	98.2	98.4
37	98.6	98.8	99.0	99.1	99.3	99.5	99.7	99.9	100.0	100.2

°C to °F =  $\frac{9}{5}(\text{°F} - 32)$

°F to °C =  $\frac{5}{9}(\text{°C} + 32)$

**Table 6. Volume: liters to gallons (to nearest 0.001).**

Liters	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
0	0.000	0.026	0.053	0.079	0.106	0.132	0.159	0.185	0.211	0.238
1	0.264	0.291	0.317	0.343	0.370	0.396	0.423	0.449	0.476	0.502
2	0.528	0.555	0.581	0.608	0.634	0.660	0.687	0.713	0.740	0.766
3	0.793	0.819	0.845	0.872	0.898	0.925	0.951	0.977	1.004	1.030
4	1.057	1.083	1.110	1.136	1.162	1.189	1.215	1.242	1.268	1.294
5	1.321	1.347	1.374	1.400	1.427	1.453	1.479	1.506	1.532	1.559
6	1.585	1.611	1.638	1.664	1.691	1.717	1.744	1.770	1.796	1.823
7	1.849	1.876	1.902	1.928	1.955	1.981	2.008	2.034	2.061	2.087
8	2.113	2.140	2.166	2.193	2.219	2.246	2.272	2.298	2.325	2.351
9	2.378	2.404	2.430	2.457	2.483	2.510	2.536	2.563	2.589	2.615
10	2.642	2.668	2.695	2.721	2.747	2.774	2.800	2.827	2.853	2.880
20	5.284	5.310	5.336	5.363	5.389	5.416	5.442	5.468	5.495	5.521
30	7.925	7.952	7.978	8.005	8.031	8.057	8.084	8.110	8.137	8.163
40	10.567	10.594	10.620	10.646	10.673	10.699	10.726	10.752	10.778	10.805
50	13.209	13.235	13.262	13.288	13.315	13.341	13.367	13.394	13.420	13.447
60	15.851	15.877	15.904	15.930	15.956	15.983	16.009	16.036	16.062	16.088
70	18.492	18.519	18.545	18.572	18.598	18.625	18.651	18.677	18.704	18.730
80	21.134	21.161	21.187	21.213	21.240	21.266	21.293	21.319	21.346	21.372
90	23.776	23.802	23.829	23.855	23.882	23.908	23.935	23.961	23.987	24.014
100	26.418	26.444	26.471	26.497	26.523	26.550	26.576	26.603	26.629	26.656

Liters to gallons = L/3.78533

Gallons to liters = gal x 3.78533

**Table 7. Length: millimeters to inches.**

mm	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
0	0.000	0.004	0.008	0.012	0.016	0.020	0.024	0.028	0.032	0.035
1	0.039	0.043	0.047	0.051	0.055	0.059	0.063	0.067	0.071	0.075
2	0.079	0.083	0.087	0.091	0.094	0.099	0.102	0.106	0.110	0.114
3	0.118	0.122	0.126	0.130	0.134	0.138	0.142	0.146	0.150	0.154
4	0.158	0.162	0.165	0.169	0.173	0.177	0.181	0.185	0.189	0.193
5	0.197	0.201	0.205	0.209	0.213	0.217	0.221	0.224	0.228	0.232
6	0.236	0.240	0.244	0.248	0.252	0.256	0.260	0.264	0.268	0.272
7	0.276	0.280	0.284	0.288	0.292	0.295	0.299	0.303	0.307	0.311
8	0.315	0.319	0.323	0.327	0.331	0.335	0.339	0.343	0.347	0.351
9	0.355	0.358	0.362	0.366	0.370	0.374	0.378	0.382	0.386	0.390
10	0.394	0.398	0.402	0.406	0.410	0.414	0.418	0.422	0.426	0.429
20	0.788	0.792	0.796	0.800	0.804	0.808	0.812	0.816	0.820	0.823
25	0.984	0.988	0.992	0.996	1.000	1.004	1.008	1.012	1.016	1.020
30	1.182	1.186	1.190	1.194	1.198	1.202	1.206	1.210	1.214	1.217
40	1.576	1.580	1.584	1.588	1.592	1.596	1.600	1.604	1.608	1.611
50	1.970	1.974	1.978	1.982	1.986	1.990	1.994	1.998	2.002	2.005
60	2.364	2.368	2.372	2.376	2.380	2.384	2.388	2.392	2.396	2.399
70	2.758	2.762	2.766	2.770	2.774	2.778	2.782	2.786	2.790	2.793
80	3.152	3.156	3.160	3.164	3.168	3.172	3.176	3.180	3.184	3.187
90	3.546	3.550	3.554	3.558	3.562	3.566	3.570	3.574	3.578	3.581
100	3.940	3.944	3.948	3.952	3.956	3.960	3.964	3.968	3.972	3.975
200	7.880	7.884	7.888	7.892	7.896	7.900	7.904	7.908	7.912	7.915
300	11.820	11.824	11.828	11.832	11.836	11.840	11.844	11.848	11.852	11.855
400	15.760	15.764	15.768	15.772	15.776	15.780	15.784	15.788	15.792	15.795
500	19.700	19.704	19.708	19.712	19.716	19.720	19.724	19.728	19.732	19.735
600	23.640	23.644	23.648	23.652	23.656	23.660	23.664	23.668	23.672	23.675
700	27.580	27.584	27.588	27.592	27.596	27.600	27.604	27.608	27.612	27.615

Millimeters to Inches = mm x 0.0394

Inches to Millimeters = in x 25.4

## Appendix B

**Table 8. Weight: grams to pounds**

grams	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1	0.0022	0.0024	0.0026	0.0029	0.0031	0.0033	0.0035	0.0037	0.0040	0.0042
2	0.0044	0.0046	0.0048	0.0051	0.0053	0.0055	0.0057	0.0059	0.0062	0.0064
3	0.0066	0.0068	0.0070	0.0073	0.0075	0.0077	0.0079	0.0081	0.0084	0.0086
4	0.0088	0.0090	0.0092	0.0095	0.0097	0.0099	0.0101	0.0103	0.0106	0.0108
5	0.0110	0.0112	0.0114	0.0117	0.0119	0.0121	0.0123	0.0125	0.0128	0.0130
6	0.0132	0.0134	0.0136	0.0139	0.0141	0.0143	0.0145	0.0147	0.0150	0.0152
7	0.0154	0.0156	0.0158	0.0161	0.0163	0.0165	0.0167	0.0169	0.0172	0.0174
8	0.0176	0.0178	0.0180	0.0183	0.0185	0.0187	0.0189	0.0191	0.0194	0.0196
9	0.0198	0.0200	0.0202	0.0205	0.0207	0.0209	0.0211	0.0213	0.0216	0.0218
10	0.0220	0.0222	0.0224	0.0227	0.0229	0.0231	0.0233	0.0235	0.0238	0.0240
	0	1	2	3	4	5	6	7	8	9
10	0.0220	0.0243	0.0265	0.0287	0.0309	0.0331	0.0353	0.0375	0.0397	0.0419
20	0.0441	0.0463	0.0485	0.0507	0.0529	0.0551	0.0573	0.0595	0.0617	0.0639
30	0.0661	0.0683	0.0705	0.0728	0.0750	0.0772	0.0794	0.0816	0.0838	0.0860
40	0.0882	0.0904	0.0926	0.0948	0.0970	0.0992	0.1014	0.1036	0.1058	0.1080
50	0.1102	0.1124	0.1146	0.1168	0.1190	0.1213	0.1235	0.1257	0.1279	0.1301
60	0.1323	0.1345	0.1367	0.1389	0.1411	0.1433	0.1455	0.1477	0.1499	0.1521
70	0.1543	0.1565	0.1587	0.1609	0.1631	0.1653	0.1675	0.1698	0.1720	0.1742
80	0.1764	0.1786	0.1808	0.1830	0.1852	0.1874	0.1896	0.1918	0.1940	0.1962
90	0.1984	0.2006	0.2028	0.2050	0.2072	0.2094	0.2116	0.2138	0.2161	0.2183
100	0.2205	0.2227	0.2249	0.2271	0.2293	0.2315	0.2337	0.2359	0.2381	0.2403
	0	10	20	30	40	50	60	70	80	90
100	0.2205	0.2425	0.2646	0.2866	0.3086	0.3307	0.3527	0.3748	0.3968	0.4189
200	0.4409	0.4630	0.4850	0.5071	0.5291	0.5512	0.5732	0.5952	0.6173	0.6393
300	0.6614	0.6834	0.7055	0.7275	0.7496	0.7716	0.7937	0.8157	0.8377	0.8598
400	0.8818	0.9039	0.9259	0.9480	0.9700	0.9921	1.0141	1.0362	1.0582	1.0803
500	1.1023	1.1243	1.1464	1.1684	1.1905	1.2125	1.2346	1.2566	1.2787	1.3007
600	1.3228	1.3448	1.3669	1.3889	1.4109	1.4330	1.4550	1.4771	1.4991	1.5212
700	1.5432	1.5653	1.5873	1.6094	1.6314	1.6535	1.6755	1.6975	1.7196	1.7416
800	1.7637	1.7857	1.8078	1.8298	1.8519	1.8739	1.8960	1.9180	1.9400	1.9621
900	1.9841	2.0062	2.0282	2.0503	2.0723	2.0944	2.1164	2.1385	2.1605	2.1826
1000	2.2046	2.2266	2.2487	2.2707	2.2928	2.3148	2.3369	2.3589	2.3810	2.4030

Grams to Pounds = g x 0.0022046

Pounds to Grams = lb x 453.592g

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