

Mathematical Symbols

=	is equal to	+4	positive 4	ABC	plane ABC
\neq	is not equal to	-4	negative 4	$\triangle ABC$	triangle ABC
<	is less than	$ -4 $	the absolute value of negative 4	\sim	is similar to
>	is greater than	10^2	ten squared	\cong	is congruent to
\approx	is approximately equal to	10^3	ten cubed	\parallel	is parallel to
...	continues without end	$\sqrt{\quad}$	positive square root	\perp	is perpendicular to
%	percent	\overleftrightarrow{AB}	line AB	π	pi
$0.\overline{3}$	0.333... (repeating decimals)	\overline{AB}	segment AB	cm^2	square centimeter
(3, 4)	ordered pair	AB	ray AB	in.^3	cubic inch
.	decimal point	$\angle ABC$	angle ABC	$^\circ$	degree
		$m\angle A$	measure of $\angle A$	2 : 3	two to three (ratio)
				$P(E)$	probability of an event

Geometric Formulas

Perimeter

Rectangle: $P = 2(\ell + w)$

Regular Polygon: $P = ns$

Square: $P = 4s$

Circumference of Circle

$C = \pi d = 2\pi r$

Area

Circle: $A = \pi r^2$

Parallelogram: $A = bh$

Rectangle: $A = \ell w$

Square: $A = s^2$

Triangle: $A = \frac{1}{2}bh$

Trapezoid: $A = \frac{1}{2}(b_1 + b_2)h$

Surface Area

Cylinder: $S = 2\pi r^2 + 2\pi rh$

Cube: $S = 6e^2$

Rectangular Prism:

$S = 2(\ell w + \ell h + wh)$

Square Pyramid: $S = s^2 + 4(\frac{1}{2}bh)$

Volume

Cylinder: $V = (\pi r^2)h$

Cube: $V = e^3$

Prism (general formula): $V = Bh$

Pyramid (general formula): $V = \frac{1}{3}Bh$

Rectangular Prism: $V = (\ell w)h$

Triangular Prism: $V = (\frac{1}{2}bh)h$

Other Formulas

Celsius ($^\circ\text{C}$) $C = \frac{5}{9}(F - 32)$

Fahrenheit ($^\circ\text{F}$) $F = \frac{9}{5}C + 32$

Simple Interest = principal \times rate \times time: $I = prt$

Distance = Rate \times Time: $d = rt$

Discount = List Price \times Rate of Discount: $D = LP \times R$ of D

Sale Price = Regular Price - Discount: $SP = RP - D$

Sales Tax = Marked Price \times Rate of Sales Tax: $T = MP \times R$ of T

Total Cost = Marked Price + Sales Tax: $TC = MP + T$

Commission = Total Sales \times Rate of Commission: $C = TS \times R$ of C

Table of Measures

Time

60 seconds (s) = 1 minute (min)
 60 minutes = 1 hour (h)
 24 hours = 1 day (d)
 7 days = 1 week (wk)

52 weeks = 1 year
 365 days = 1 year
 366 days = 1 leap year
 100 years = 1 century (cent.)

Metric Units

Length

1000 millimeters (mm) = 1 meter (m)
 100 centimeters (cm) = 1 meter
 10 decimeters (dm) = 1 meter
 10 meters = 1 dekameter (dam)
 100 meters = 1 hectometer (hm)
 1000 meters = 1 kilometer (km)

Capacity

1000 milliliters (mL) = 1 liter (L)
 100 centiliters (cL) = 1 liter
 10 deciliters (dL) = 1 liter
 10 liters = 1 dekaliter (daL)
 100 liters = 1 hectoliter (hL)
 1000 liters = 1 kiloliter (kL)

Mass

1000 milligrams (mg) = 1 gram (g)
 100 centigrams (cg) = 1 gram
 10 decigrams (dg) = 1 gram

10 grams = 1 dekagram (dag)
 100 grams = 1 hectogram (hg)
 1000 grams = 1 kilogram (kg)

Customary Units

Length

12 inches (in.) = 1 foot (ft)
 3 feet = 1 yard (yd)
 36 inches = 1 yard
 5280 feet = 1 mile (mi)
 1760 yards = 1 mile

Capacity

8 fluid ounces (fl oz) = 1 cup (c)
 2 cups = 1 pint (pt)
 2 pints = 1 quart (qt)
 4 quarts = 1 gallon (gal)

Weight

16 ounces (oz) = 1 pound (lb) 2000 pounds = 1 ton (T)

Percent Table

$1\% = \frac{1}{100} = 0.01$	$50\% = \frac{1}{2} = 0.5$	$12\frac{1}{2}\% = \frac{1}{8} = 0.125$	$87\frac{1}{2}\% = \frac{7}{8} = 0.875$
$10\% = \frac{1}{10} = 0.1$	$60\% = \frac{3}{5} = 0.6$	$25\% = \frac{1}{4} = 0.25$	$16\frac{2}{3}\% = \frac{1}{6} = 0.1\bar{6}$
$20\% = \frac{1}{5} = 0.2$	$70\% = \frac{7}{10} = 0.7$	$37\frac{1}{2}\% = \frac{3}{8} = 0.375$	$33\frac{1}{3}\% = \frac{1}{3} = 0.3\bar{3}$
$30\% = \frac{3}{10} = 0.3$	$80\% = \frac{4}{5} = 0.8$	$62\frac{1}{2}\% = \frac{5}{8} = 0.625$	$66\frac{2}{3}\% = \frac{2}{3} = 0.6\bar{6}$
$40\% = \frac{2}{5} = 0.4$	$90\% = \frac{9}{10} = 0.9$	$75\% = \frac{3}{4} = 0.75$	$83\frac{1}{3}\% = \frac{5}{6} = 0.8\bar{3}$