
MATHEMATICS DEFINITIONS AND FORMULAS

Definitions

$=$ is equal to	\leq is less than or equal to	\overline{AB} line segment AB
\neq is not equal to	$\pi \approx 3.14$	\overleftrightarrow{AB} line AB
$>$ is greater than	\sphericalangle angle	AB length of \overline{AB}
$<$ is less than	\perp right angle	$\frac{a}{b}$ or $a : b$ ratio of a to b
\geq is greater than or equal to		

Abbreviations for Units of Measurement

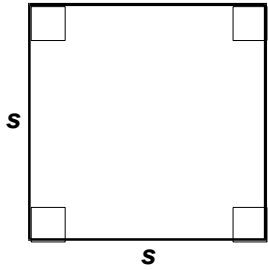
U.S. Standard		SI System		
Distance	in. inch ft. foot mi. mile	Distance	m meter km kilometer cm centimeter mm millimeter	Time sec. second min. minute hr. hour
Volume	gal. gallon qt. quart oz. fluid ounce	Volume	L liter mL milliliter cc cubic centimeter	
Weight	lb. pound oz. ounce	Mass	g gram kg kilogram mg milligram	
Temperature	$^{\circ}\text{F}$ degree Fahrenheit	Temperature	$^{\circ}\text{C}$ degree Celsius K Kelvin	
Speed	mph miles per hour			

Conversions for Units of Measurement

U.S. Standard		SI System	
Length	12 inches = 1 foot 3 feet = 1 yard 5280 feet = 1 mile	Length	10 millimeters = 1 centimeter 100 centimeters = 1 meter 1000 meters = 1 kilometer
Volume (liquid)	8 ounces = 1 cup 2 cups = 1 pint 2 pints = 1 quart 4 quarts = 1 gallon	Volume	1000 milliliters = 1 liter 1000 liters = 1 kiloliter
Weight	16 ounces = 1 pound 2000 pounds = 1 ton	Weight	1000 milligrams = 1 gram 1000 grams = 1 kilogram
	Time		60 seconds = 1 minute 60 minutes = 1 hour 24 hours = 1 day

Geometric Figures

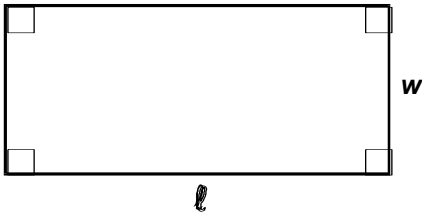
Square



$$\text{Area} = s^2$$

$$\text{Perimeter} = 4s$$

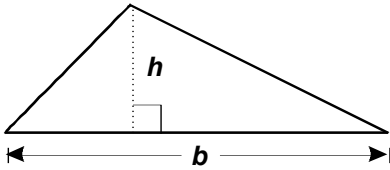
Rectangle



$$\text{Area} = lw$$

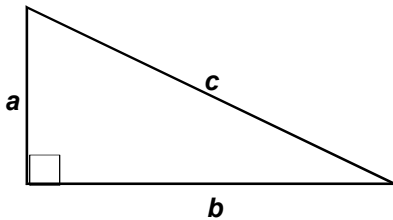
$$\text{Perimeter} = 2l + 2w$$

Triangle



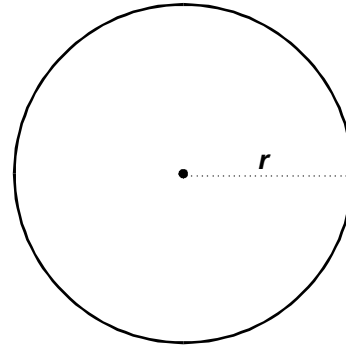
$$\text{Area} = \frac{1}{2}bh$$

Right triangle



$$\text{Pythagorean formula: } c^2 = a^2 + b^2$$

Circle

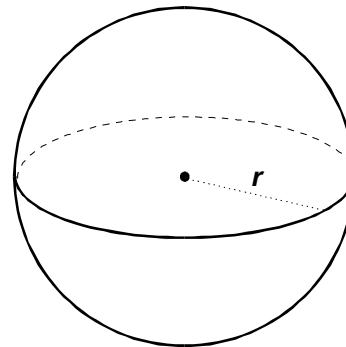


$$\text{Area} = \pi r^2$$

$$\text{Circumference} = 2\pi r$$

$$\text{Diameter} = 2r$$

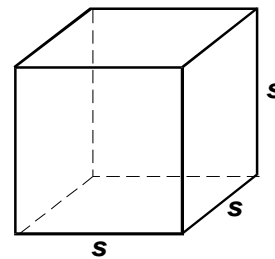
Sphere



$$\text{Surface area} = 4\pi r^2$$

$$\text{Volume} = \frac{4}{3}\pi r^3$$

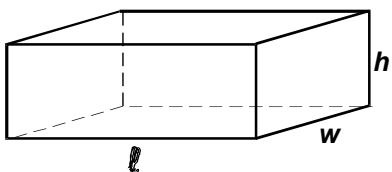
Cube



$$\text{Surface area} = 6s^2$$

$$\text{Volume} = s^3$$

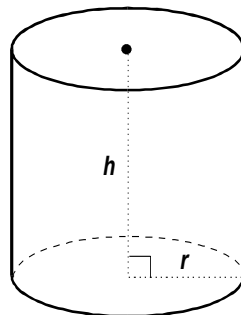
Rectangular solid



$$\text{Surface area} = 2lw + 2lh + 2wh$$

$$\text{Volume} = lwh$$

Right circular cylinder



$$\text{Surface area} = 2\pi rh + 2\pi r^2$$

$$\text{Volume} = \pi r^2 h$$

End of Definitions and Formulas