

GLOBAL  
EDITION



# Basic College Mathematics

TWELFTH EDITION

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ALWAYS LEARNING

PEARSON

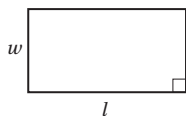
# Geometric Formulas

## PLANE GEOMETRY

### Rectangle

Area:  $A = l \cdot w$

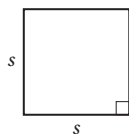
Perimeter:  $P = 2 \cdot l + 2 \cdot w$



### Square

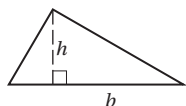
Area:  $A = s^2$

Perimeter:  $P = 4 \cdot s$



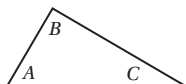
### Triangle

Area:  $A = \frac{1}{2} \cdot b \cdot h$



### Sum of Angle Measures

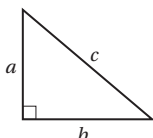
$A + B + C = 180^\circ$



### Right Triangle

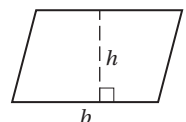
Pythagorean Theorem:

$$a^2 + b^2 = c^2$$



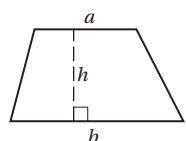
### Parallelogram

Area:  $A = b \cdot h$



### Trapezoid

Area:  $A = \frac{1}{2} \cdot h \cdot (a + b)$

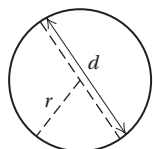


### Circle

Area:  $A = \pi \cdot r^2$

Circumference:

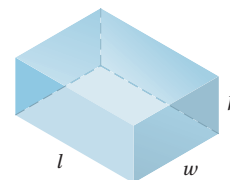
$C = \pi \cdot d = 2 \cdot \pi \cdot r$  ( $\frac{22}{7}$  and 3.14 are different approximations for  $\pi$ )



## SOLID GEOMETRY

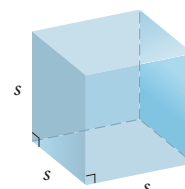
### Rectangular Solid

Volume:  $V = l \cdot w \cdot h$



### Cube

Volume:  $V = s^3$

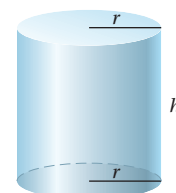


### Right Circular Cylinder

Volume:  $V = \pi \cdot r^2 \cdot h$

Surface Area:

$$S = 2 \cdot \pi \cdot r \cdot h + 2 \cdot \pi \cdot r^2$$

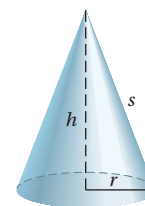


### Right Circular Cone

Volume:  $V = \frac{1}{3} \cdot \pi \cdot r^2 \cdot h$

Surface Area:

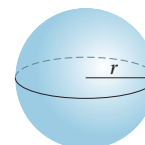
$$S = \pi \cdot r^2 + \pi \cdot r \cdot s$$



### Sphere

Volume:  $V = \frac{4}{3} \cdot \pi \cdot r^3$

Surface Area:  $S = 4 \cdot \pi \cdot r^2$



# Fraction, Decimal, and Percent Equivalents

Fraction Notation	$\frac{1}{10}$	$\frac{1}{8}$	$\frac{1}{6}$	$\frac{1}{5}$	$\frac{1}{4}$	$\frac{3}{10}$	$\frac{1}{3}$	$\frac{3}{8}$	$\frac{2}{5}$	$\frac{1}{2}$	$\frac{3}{5}$	$\frac{5}{8}$	$\frac{2}{3}$	$\frac{7}{10}$	$\frac{3}{4}$	$\frac{4}{5}$	$\frac{5}{6}$	$\frac{7}{8}$	$\frac{9}{10}$	$\frac{1}{1}$
Decimal Notation	0.1	0.125	0.166	0.2	0.25	0.3	0.333	0.375	0.4	0.5	0.6	0.625	0.666	0.7	0.75	0.8	0.833	0.875	0.9	1
Percent Notation	10%	12.5%	16.6%	20%	25%	30%	33.3%	37.5%	40%	50%	60%	62.5%	66.6%	70%	75%	80%	83.3%	87.5%	90%	100%

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