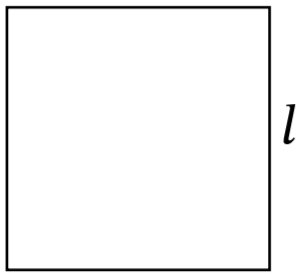


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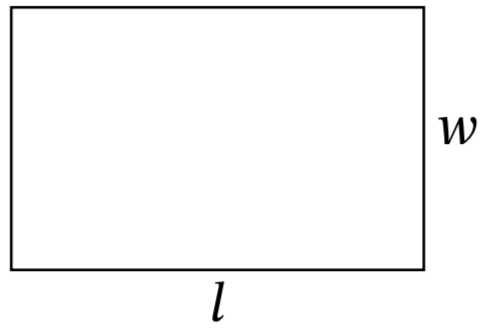
## AREA

Square



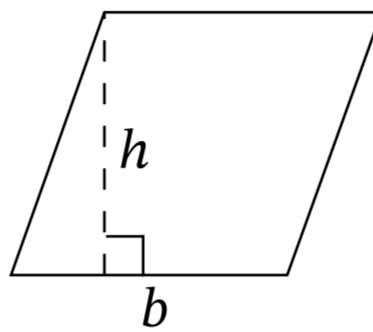
$$A = l^2$$

Rectangle



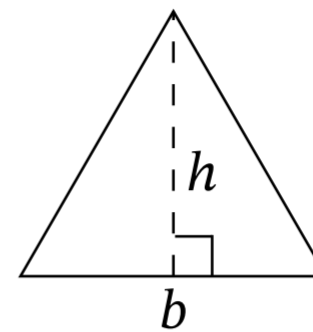
$$A = lw$$

Parallelogram



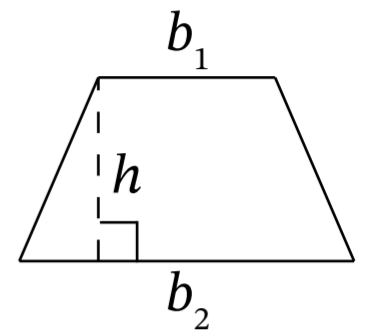
$$A = bh$$

Triangle



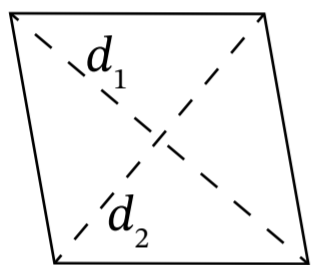
$$A = \frac{1}{2}bh$$

Trapezoid



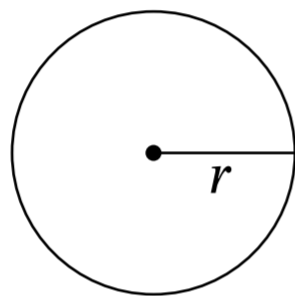
$$A = \frac{1}{2}(b_1 + b_2)h$$

Rhombus



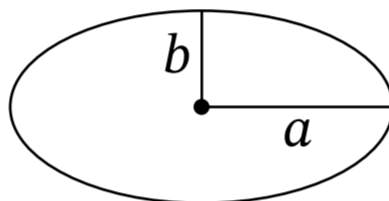
$$A = \frac{1}{2}(d_1 \times d_2)$$

Circle



$$A = \pi r^2$$

Ellipse



$$A = \pi ab$$

### Perimeter

The sum of all sides of a shape

### Circumference

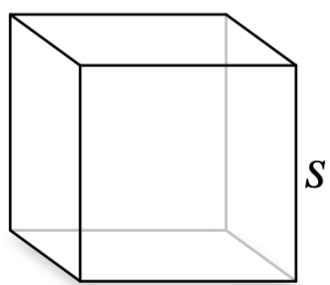
The distance around a circle ( $C=2\pi r$ )

### Pythagorean Theorem

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

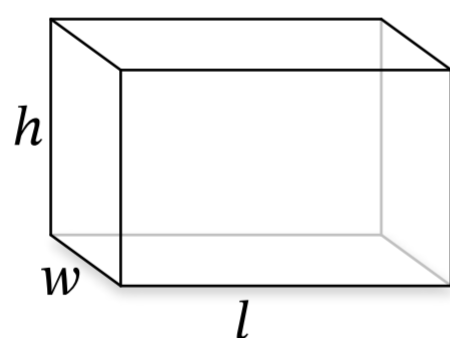
## VOLUME

Cube



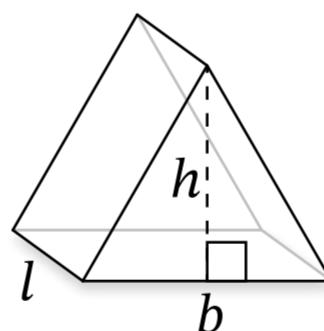
$$V = s^3$$

Rectangular Prism



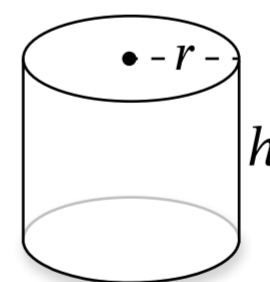
$$V = l \times w \times h$$

Triangular Prism



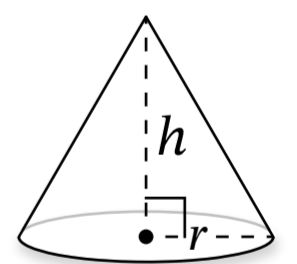
$$V = \frac{b \times h \times l}{2}$$

Cylinder



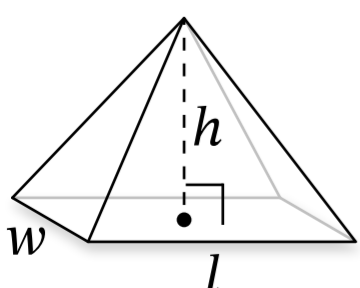
$$V = \pi r^2 h$$

Cone



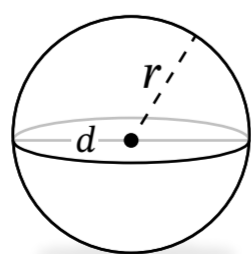
$$V = \frac{\pi r^2 h}{3}$$

Rectangular Pyramid



$$V = \frac{l \times w \times h}{3}$$

Sphere



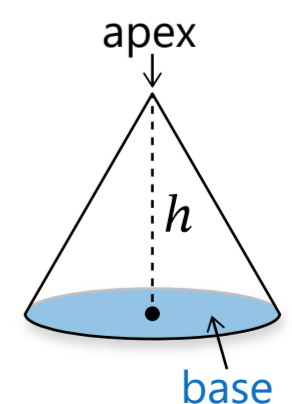
$$V = \frac{4}{3} \pi r^3$$

### Apex

The highest point of a shape, opposite from the base

### Base

The face of a shape perpendicular to the direction height is measured



# TEAS<sup>®</sup> MATH FORMULAS

## DISTANCE

1 ft = 12 in  
 1 in = 2.54 cm  
 1 yd = 3 ft  
 1 m = 3.28 ft = 1.09 yd  
 1 mi = 5,280 ft = 1.61 km

## CAPACITY

1 oz = 28.35 g  
 1 cup = 8 oz  
 2 cups = 1 pint  
 2 pints = 1 quart  
 4 quarts = 1 gallon  
 1 gallon = 3.8 L

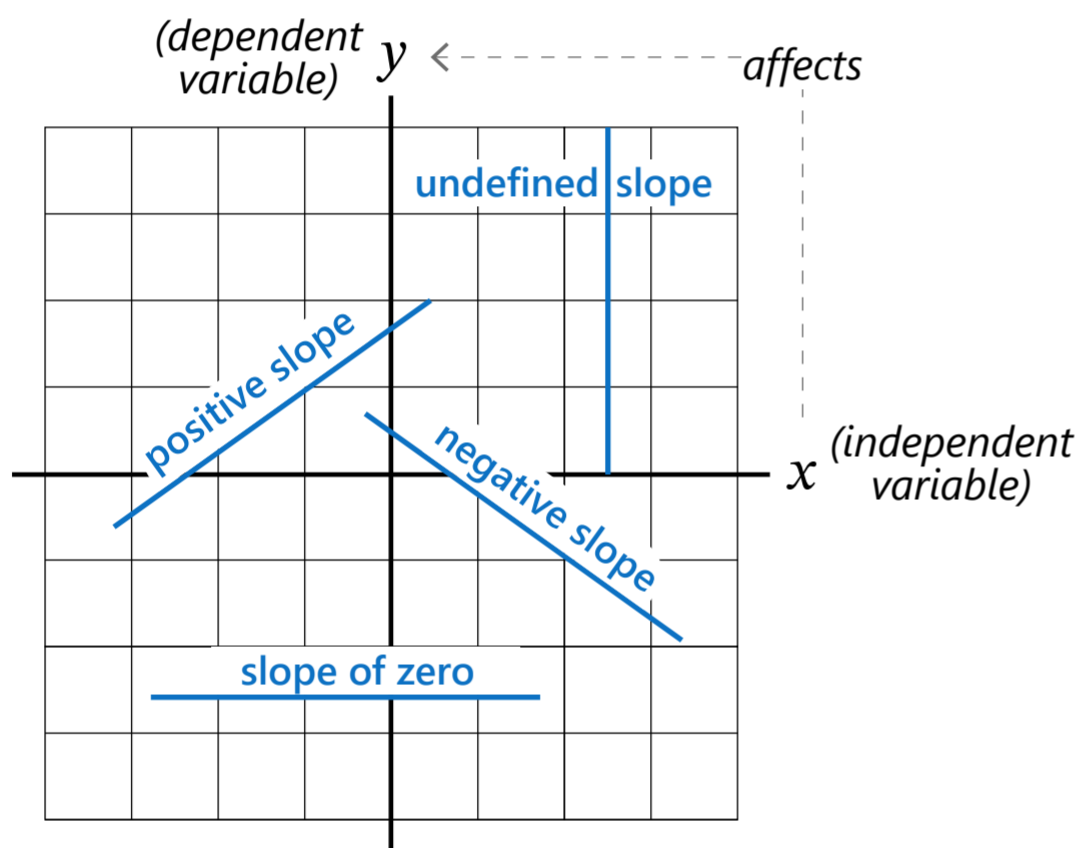
## WEIGHT

1 lb = 16 oz  
 1 kg = 2.2 lb = 35.27 oz  
 1 t = 2,000 lb = 907.19 kg

## TEMPERATURE

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

## SLOPE



### Slope

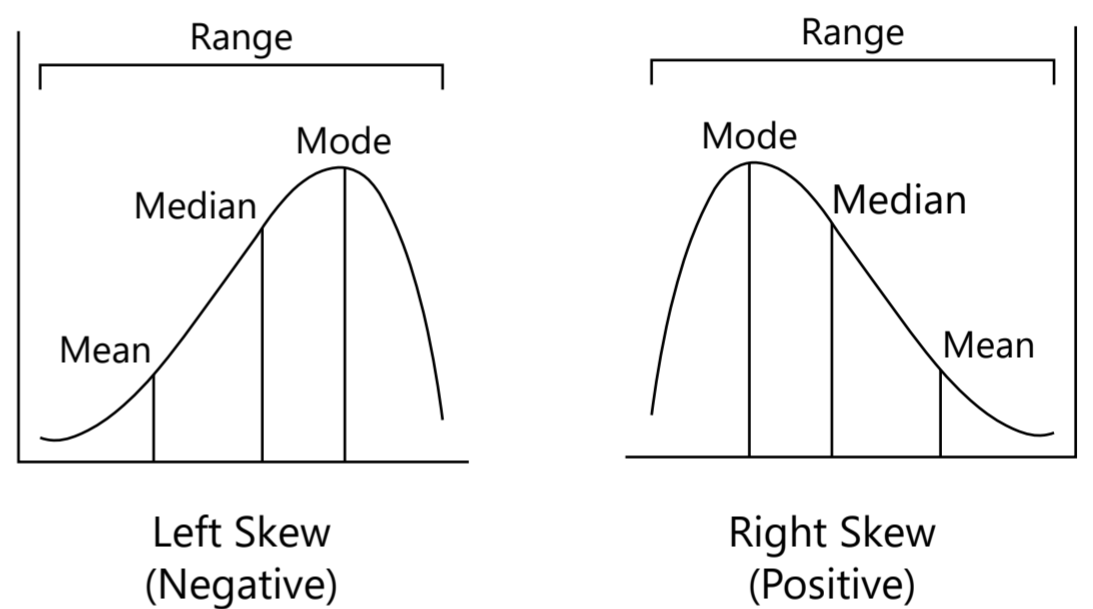
$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{rise}}{\text{run}}$$

### Slope Intercept Form

$$y = mx + b$$

$m = \text{slope}$     $b = \text{y-intercept}$

## STATISTICS



**Mean:** Average

**Median:** Middle

**Mode:** Most common/frequent

**Range:** Distance between smallest and largest

## PERCENTS, FRACTIONS, AND DECIMALS

### Percent Increase

$$\left( \frac{\text{new value} - \text{original value}}{\text{original value}} \right) \times 100$$

### Percent Decrease

$$\left( \frac{\text{original value} - \text{new value}}{\text{original value}} \right) \times 100$$

### Percent to Fraction/Decimal

$$\frac{\text{Percentage}}{100}$$

### Fraction to Decimal

$$\frac{\text{numerator}}{\text{denominator}}$$

### Fraction to Percent

$$\left( \frac{\text{numerator}}{\text{denominator}} \right) \times 100$$

### Decimal to Fraction

$$\frac{\text{decimal}}{1} \times \frac{10^n}{10^n}$$

### Decimal to Percent

$$\text{decimal} \times 100$$

# TEAS<sup>®</sup> MATH FORMULAS

## METRIC CONVERSIONS

King	Henry	Died	By	Drinking	Chocolate	Milk
↓	↓	↓	↓	↓	↓	↓
kilo	hecto	deca	base	deci	centi	milli
↓	↓	↓	↓	↓	↓	↓
0.001	0.01	0.1	1.0	10.0	100.0	1,000.0

## EXPRESSIONS

Inequalities:  $ax + b < c$ ,  $ax + b > c$   
 $ax + b \leq c$ ,  $ax + b \geq c$

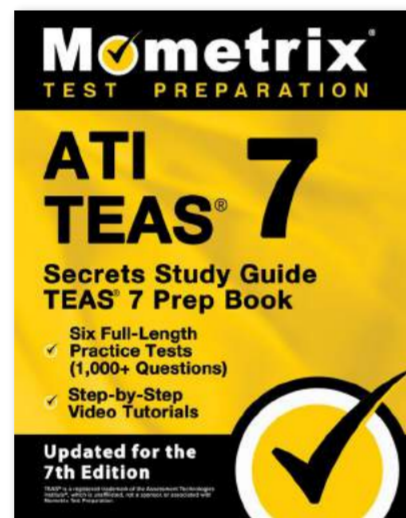
Linear Equations:  $ax + b = c$

Quadratic Equations:  $ax^2 + bx + c = 0$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

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TEAS 7 Study Guide



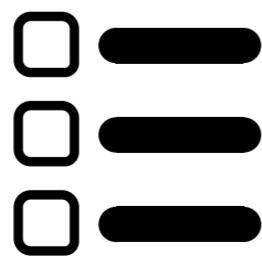
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