

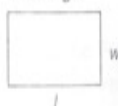
## Mathematics 7 Reference Sheet

Circle



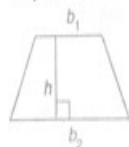
Area =  $\pi r^2$   
Circumference =  $2\pi r$

Rectangle



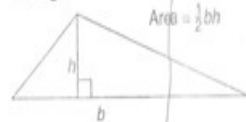
Area =  $lw$   
Perimeter =  $2l + 2w$

Trapezoid



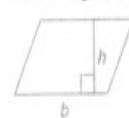
Area =  $\frac{1}{2}h(b_1 + b_2)$

Triangle



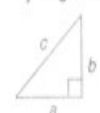
Area =  $\frac{1}{2}bh$

Parallelogram



Area =  $bh$

Pythagorean Theorem



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

Cylinder



Volume =  $\pi r^2 h$   
Surface Area =  $2\pi r^2 + 2\pi rh$   
Lateral Area =  $2\pi rh$

Cube



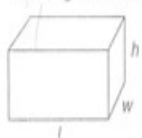
Volume =  $s^3$   
Surface Area =  $6s^2$

Sphere



Volume =  $\frac{4}{3}\pi r^3$   
Surface Area =  $4\pi r^2$

Rectangular Prism



Volume =  $lwh$   
Surface Area =  $2wl + 2lh + 2wh$   
Lateral Area =  $2(l + w)h$

### Definitions

- MEAN:** In a collection of data, the sum of all the data divided by the number of data.
- MEDIAN:** The middle number or average of the two middle numbers in a collection of data when the data are arranged in order.
- MODE:** The number or numbers that occur most often in a collection of data.
- RANGE:** The difference between the greatest and the least numbers in a collection of data.
- DISTANCE TRAVELED:** distance = rate x time
- REFLECTION OR FLIP:** A mirror image of a figure across its line of symmetry.
- TRANSLATION OR SLIDE:** A change in position of a figure. All points in the figure move in the same direction for the same distance.
- ROTATION OR TURN:** Turning a figure clockwise or counter-clockwise about a point.

### English Conversions

- 8 ounces = 1 cup  
2 cups = 1 pint  
2 pints = 1 quart  
4 quarts = 1 gallon  
3 teaspoons = 1 tablespoon  
16 tablespoons = 1 cup  
16 ounces = 1 pint  
8 pints = 1 gallon  
16 ounces = 1 pound  
5280 feet = 1 mile

### Metric Units of Length

1 Kilometer	=	1000 meters
1 Hectometer	=	100 meters
1 Dekameter	=	10 meters
1 Meter	=	1 meter
1 Decimeter	=	0.1 meter
1 Centimeter	=	0.01 meter
1 Millimeter	=	0.001 meter