

## Missouri Assessment Program Mathematics Reference Sheet Grades 6 - 8

Standard Units	Metric Units
<b>Conversions – Length</b>	
1 yard (yd) = 3 feet (ft) = 36 inches (in)	1 centimeter (cm) = 10 millimeters (mm)
1 mile (mi) = 1,760 yards (yd) = 5,280 feet (ft)	1 meter (m) = 100 centimeters (cm)
	1 kilometer (km) = 1,000 meters (m)
<b>Conversions – Volume</b>	
1 cup = 8 fluid ounces (fl oz)	1 liter (l) = 1,000 milliliters (ml)
1 pint (pt) = 2 cups	1 liter (l) = 1,000 cubic centimeters (cm)
1 quart (qt) = 2 pints (pt)	
1 gallon (gal) = 4 quarts (qt)	
<b>Conversions – Weight/Mass</b>	
1 pound (lb) = 16 ounces (oz)	1 gram (g) = 1,000 milligrams (mg)
1 ton = 2,000 pounds (lb)	1 kilogram (kg) = 1,000 grams (g)

Grade Levels	Shape	Formula
<b>Area</b>		
6, 7, 8	Triangle	$A = \frac{1}{2}bh$
6, 7, 8	Rectangle	$A = lw$
6, 7, 8	Parallelogram	$A = bh$
6, 7, 8	Square	$A = s^2$
7, 8	Circle	$A = \pi r^2$
7, 8	Trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$
<b>Volume</b>		
6, 7, 8	Prism or Cylinder	$V = Bh$
Note: The volume $V$ of all prisms and cylinders is $V=Bh$ where $B$ is the area of the base and $h$ is the height of the prism or cylinder		
7, 8	Cone and Pyramid	$V = \frac{1}{3}Bh$
Note: The volume $V$ of all cones or pyramids is $V=Bh$ where $B$ is the area of the base and $h$ is the height of the cone or pyramid		
8	Sphere	$V = \frac{4}{3}\pi r^3$
<b>Additional Formulas</b>		
7, 8	Circumference	$C = \pi d$
8	Pythagorean Theorem	$c^2 = a^2 + b^2$
8	Slope intercept	$y = mx + b$
8	Standard Linear form	$Ax + By = C$