Exit Level Mathematics Chart

LENGTH

Metric	**Customary**
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches

CAPACITY AND VOLUME

Metric	**Customary**
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 fluid ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 fluid ounces

MASS AND WEIGHT

Metric	**Customary**
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces

TIME

1 year = 365 days

1 year = 12 months

1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

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Inches

Centimeters

Exit Level Mathematics Chart

Perimeter	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
Circumference	circle	$C = 2\pi r$ or $C = \pi d$
Area	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2} bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2} (b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	regular polygon	$A = \frac{1}{2} aP$
	circle	$A = \pi r^2$

P represents the Perimeter of the Base of a three-dimensional figure.

B represents the Area of the Base of a three-dimensional figure.

Surface Area	cube (total)	$S = 6s^2$
	prism (lateral)	$S = Ph$
	prism (total)	$S = Ph + 2B$
	pyramid (lateral)	$S = \frac{1}{2} Pl$
	pyramid (total)	$S = \frac{1}{2} Pl + B$
	cylinder (lateral)	$S = 2\pi rh$
	cylinder (total)	$S = 2\pi rh + 2\pi r^2$ or $S = 2\pi r(h + r)$
	cone (lateral)	$S = \pi rl$
	cone (total)	$S = \pi rl + \pi r^2$ or $S = \pi r(l + r)$
	sphere	$S = 4\pi r^2$
Volume	prism or cylinder	$V = Bh$
	pyramid or cone	$V = \frac{1}{3} Bh$
	sphere	$V = \frac{4}{3} \pi r^3$
Special Right Triangles	30°, 60°, 90°	$x, \ x\sqrt{3}, \ 2x$
	45°, 45°, 90°	$x, \ x, \ x\sqrt{2}$
Pythagorean Theorem		$a^2 + b^2 = c^2$
Distance Formula		$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Slope of a Line		$m = \dfrac{y_2 - y_1}{x_2 - x_1}$
Midpoint Formula		$M = \left(\dfrac{x_1 + x_2}{2}, \ \dfrac{y_1 + y_2}{2} \right)$
Quadratic Formula		$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Slope-Intercept Form of an Equation		$y = mx + b$
Point-Slope Form of an Equation		$y - y_1 = m(x - x_1)$
Standard Form of an Equation		$Ax + By = C$
Simple Interest Formula		$I = prt$