

# MATH

# FORMULAS & SYMBOLS

Use this guide to focus on applying, rather than memorizing, formulas and symbols for test questions.

## Mathematics Formula Explanations

This displays formulas relating to geometric measurement and certain algebra concepts and is available on the 2014 GED® test — Mathematical Reasoning.

### Area of a:

parallelogram  $A = bh$

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

### Surface Area and Volume of a:

rectangular/right prism  $SA = ph + 2B$   $V = Bh$

cylinder  $SA = 2\pi rh + 2\pi r^2$   $V = \pi r^2 h$

pyramid  $SA = \frac{1}{2}ps + B$   $V = \frac{1}{3}Bh$

cone  $SA = \pi rs + \pi r^2$   $V = \frac{1}{3}\pi r^2 h$

sphere  $SA = 4\pi r^2$   $V = \frac{4}{3}\pi r^3$

(p = perimeter of base B;  $\pi \approx 3.14$ )

### Algebra

slope of a line  $m = \frac{y_2 - y_1}{x_2 - x_1}$

slope-intercept form of the equation of a line  $y = mx + b$

point-slope form of the equation of a line  $y - y_1 = m(x - x_1)$

standard form of a quadratic equation  $y = ax^2 + bx + c$

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

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

simple interest  $I = prt$

(I = interest, p = principal, r = rate, t = time)

## Æ Symbol Tool Explanation

The 2014 GED® test on computer contains a tool known as the “Æ Symbol Tool.” Use this guide to learn about entering special mathematical symbols into fill-in-the-blank item types.

Symbol	Explanation	Symbol	Explanation	Symbol	Explanation
$\pi$	pi		absolute value	-	minus or negative
$f$	function	$\times$	multiplication	(	open or left parenthesis
$\geq$	greater than or equal to	$\div$	division	)	close or right parenthesis
$\leq$	less than or equal to	$\pm$	positive or negative	>	greater than
$\neq$	not equal to	$\infty$	infinity	<	less than
2	2 exponent (“squared”)	$\sqrt{\quad}$	square root	=	equals
3	3 exponent (“cubed”)	+	plus or positive		

