

2014 GED® PROGRAM

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:

square	$A = s^2$
rectangle	$A = lw$
parallelogram	$A = bh$
triangle	$A = \frac{1}{2}bh$
trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$
circle	$A = \pi r^2$

Perimeter of a:

square	$P = 4s$
rectangle	$P = 2l + 2w$
triangle	$P = s_1 + s_2 + s_3$
Circumference of a circle	$C = 2\pi r$ OR $C = \pi d$; $\pi \approx 3.14$

Surface area and volume of a:

rectangular prism	$SA = 2lw + 2lh + 2wh$	$V = lwh$
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	$SA = 4\pi r^2$	$V = \frac{4}{3}\pi r^3$

$(p = \text{perimeter of base with area } B; \pi \approx 3.14)$

Data

mean	mean is equal to the total of the values of a data set, divided by the number of elements in the data set
median	median is the middle value in an odd number of ordered values of a data set, or the mean of the two middle values in an even number of ordered values in a data set

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	$I = Prt$ $(I = \text{interest}, P = \text{principal}, r = \text{rate}, t = \text{time})$
distance formula	$d = rt$
total cost	total cost = (number of units) × (price per unit)

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
π	pi		absolute value	-	minus or negative
f	function	×	multiplication	(	open or left parenthesis
≥	greater than or equal to	÷	division	)	close or right parenthesis
≤	less than or equal to	±	positive or negative	>	greater than
≠	not equal to	∞	infinity	<	less than
2	2 exponent (“squared”)	√	square root	=	equals
3	3 exponent (“cubed”)	+	plus or positive		