

# GED Mathematics Formula Sheet

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

( $p$  = 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

$$I = Prt$$

( $I$  = interest,  $P$  = principal,  $r$  = rate,  $t$  = time)

distance formula

$$d = rt$$

total cost

total cost = (number of units)  $\times$  (price per unit)