

# Common Formulas in Geometry—Learning-Laboratory.com

Printable to quiz yourself or keep for reference!

## Coordinate Geometry

Distance Formula	$\sqrt{(\Delta x)^2+(\Delta y)^2}$	Where $\Delta x$ is the same as $x_2-x_1$ ; $\Delta y$ is $y_2-y_1$
Midpoint Formula	$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$	Where the result is a coordinate pair
Slope	$m=\frac{(y_2-y_1)}{(x_2-x_1)}$	Where $m$ is the slope
Slope-intercept form of a line	$y=mx+b$	Where $m$ is the slope and $b$ is the y-intercept
Standard form of a line	$Ax+By=C$	Where $A$ and $B$ are not both zero
Point-slope form of a line	$(y-y_1)=m(x-x_1)$	Where $m$ is the slope and $(x_1,y_1)$ is a point on the line

## Geometry of Shapes and Solids

Circumference of a circle	$C=\pi d$	Where $d$ is <i>diameter</i> , equivalent to $2r$
Area of a circle	$A=\pi r^2$	Where $r$ is <i>radius</i>
Perimeter of a rectangle	$P=2l+2w$	Where $l$ is <i>length</i> and $w$ is <i>width</i>
Area of a rectangle	$A=lw$	Where $l$ is <i>length</i> and $w$ is <i>width</i>
Area of a triangle	$A=\frac{1}{2}bh$	Where $b$ is <i>base</i> and $h$ is <i>height</i>
Area of a parallelogram	$A=bh$	Where $b$ is <i>base</i> and $h$ is <i>height</i>
Surface area of a sphere	$SA=4\pi r^2$	Where $r$ is <i>radius</i>
Volume of a sphere	$V=\frac{4}{3}\pi r^3$	Where $r$ is <i>radius</i>
Surface area of a cylinder	$SA=2\pi r^2+2\pi rh$	Where $r$ is <i>radius</i> and $h$ is <i>height</i>
Volume of a cylinder	$V=\pi r^2h$	Where $r$ is <i>radius</i> and $h$ is <i>height</i>
Volume of a rectangular prism	$V=lwh$	Where $l$ is <i>length</i> , $w$ is <i>width</i> , and $h$ is <i>height</i>

