## Important Formulas

slope-intercept form: $y=m x+b$
example: $y=\frac{3}{2} x-7$
slope formula: $m=\frac{x_{2}-x_{1}}{y_{2}-y_{1}}$
example: Find the slope of the line that passes through the points $(2,-9)$ and $(-5,7)$.
distance formula: $d=\sqrt{\left(x_{1}-x_{2}\right)+\left(y_{1}-y_{2}\right)}$ example: Find the distance between the points $(2,-1)$ and $(5,-8)$.
point-slope formula: $y-y_{1}=m\left(x-x_{1}\right)$
example: Find the equation for the line that has a slope of 3 and passes through the point $(-2,5)$.

Quadratic Formula: $x=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a}$
midpoint: $(x, y)=\left(\frac{x_{1}+x_{2}}{2}, \frac{y_{1}+y_{2}}{2}\right)$
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AREA


$$
A=\frac{1}{2} \times b \times h \quad A=\frac{(a+b)}{2} \times h
$$

$A=\pi \times r^{2}$

## volume


$V=\frac{1 \times w \times h}{3}$

## Area and Volume

## volume



