
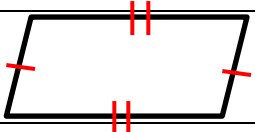


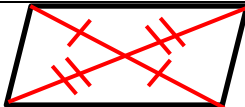
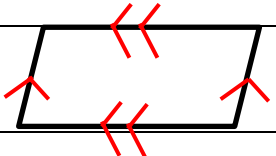
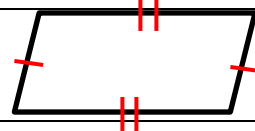

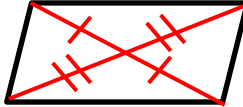


Slope	Distance/Length	Midpoint
<p>1. $m = \frac{\text{rise}}{\text{run}}$ (use with graph)</p> <p>2. $m = \frac{y_2 - y_1}{x_2 - x_1}$ (use with points)</p> <p>3. Parallel lines have the SAME slope.</p> <p>4. Perpendicular lines have the OPPOSITE and RECIPROCAL slopes.</p>	<p>1. $a^2 + b^2 = c^2$ (Right triangle)</p> <p>2. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ Use with points</p>	<p>$(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2})$</p> <p>* Average of the endpoints</p>

Writing Equations of Lines: Ex. $y = mx + b \rightarrow y = \frac{1}{2}x + 5$	
<p>Step One: Find the slope (using one of the 4 methods) or solve the equation for y Ex. $2x - 3y = 6$ $-3y = -2x + 6$ $y = \frac{2}{3}x - 2 \rightarrow$ slope = $\frac{2}{3}$</p>	<p>Step Two: Plug the slope and an ordered pair of the line into $y = mx + b$ and solve for b</p>

Properties of Parallelograms:	
1. gram \rightarrow opposite sides parallel (definition of parallelogram)	
2. gram \rightarrow opposite sides congruent	
3. gram \rightarrow opposite angles congruent	
4. gram \rightarrow consecutive angles supplementary	$* + o = 180^\circ$ 
5. gram \rightarrow diagonals bisect each other	

Proving Quadrilaterals are Parallelograms:	
1. If quad has both pairs of opposite sides parallel \rightarrow gram (definition of parallelogram)	
2. If quad has both pairs of opposite sides congruent \rightarrow gram	
3. If quad has both pairs of opposite angles congruent \rightarrow gram	
4. If quad has diagonals that bisect each other \rightarrow gram	
5. If quad has one pairs of opposite sides both parallel & congruent \rightarrow gram	