

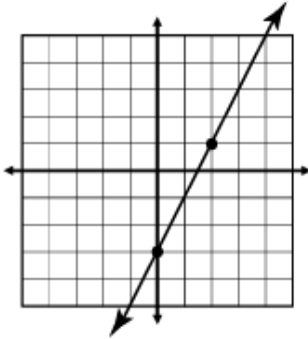
EQUATIONS OF LINES

Slope-Intercept Form: _____

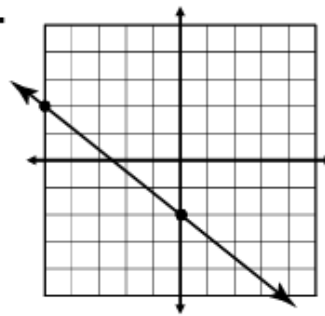
$m =$ _____ ; $b =$ _____

Examples: Given the graph, write the equation in slope-intercept form.

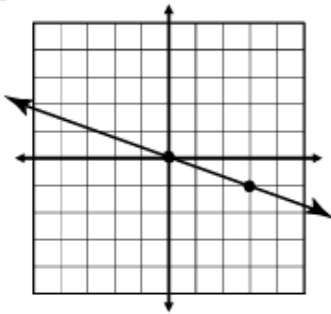
1.



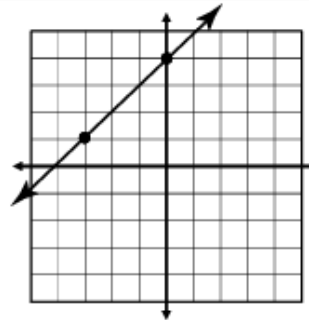
2.



3.



4.



Standard Form: _____

Because standard form does not give you slope (m), you must be able to convert them to slope-intercept form.

7. $x + y = 6$

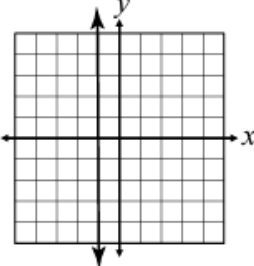
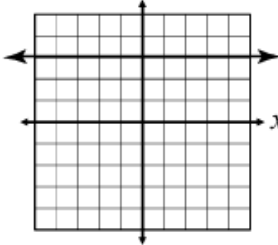
8. $5x + 2y = -2$

9. $2x - 4y = 28$

10. $3x - y = 5$

11. $6x + 8y = -16$

12. $x - 4y = 0$

Vertical Lines	Horizontal Lines
<p>A vertical line is written in the form $x = a$, where a represents the line's x-intercept.</p>  <p>Equation: _____.</p>	<p>A horizontal line is written in the form $y = a$, where a represents the line's y-intercept.</p>  <p>Equation: _____.</p>

<p>THE POINT-SLOPE FORMULA</p>	<p>Used to write the equation of a line when given a point (x_1, y_1) and the slope of the line (m).</p> <p>Formula: _____</p> <p>*Be sure to distribute and solve for y!</p>	
Type 1: Given a Point and Slope		
<p>1. $(4, 1)$; slope = 2</p>	<p>2. $(2, 4)$; slope = $\frac{1}{2}$</p>	
<p>3. $(-6, 0)$; slope = $\frac{2}{3}$</p>	<p>4. $(-8, -1)$; slope = $-\frac{3}{4}$</p>	
Type 2: Given Two Points		
<p>5. $(-3, 7)$ and $(1, -1)$</p>	<p>6. $(-6, -7)$ and $(3, -4)$</p>	
<p>7. $(2, -1)$ and $(4, -6)$</p>	<p>8. $(-3, -8)$ and $(2, 7)$</p>	

Writing Parallel & Perpendicular Equations

9. Write an equation **parallel** to $y = 3x + 6$ that passes through the point $(4, 7)$.

10. Write an equation **parallel** to $2x + 5y = 15$ that passes through the point $(-10, 1)$.

11. Write an equation **parallel** to $5x - 4y = 4$ that passes through the point $(-8, 2)$.

12. Write an equation **perpendicular** to $y = -\frac{1}{5}x + 9$ that passes through the point $(-2, -2)$.

13. Write an equation **perpendicular** to $5x + 6y = 18$ that passes through the point $(10, 7)$.

14. Write an equation **perpendicular** to $x - 4y = 20$ that passes through the point $(2, -5)$.