

Name: _____

Date: _____

Topic: _____

Class: _____

Main Ideas/Questions | **Notes/Examples**

Slope-Intercept Form

Linear equations are frequently written in **slope-intercept form**:

m is the _____ and b is the _____

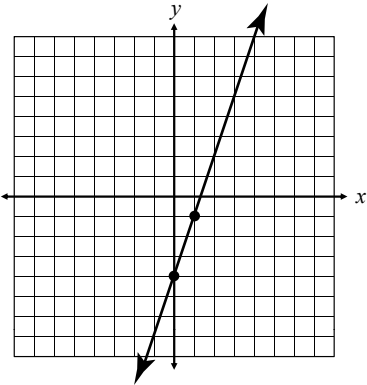
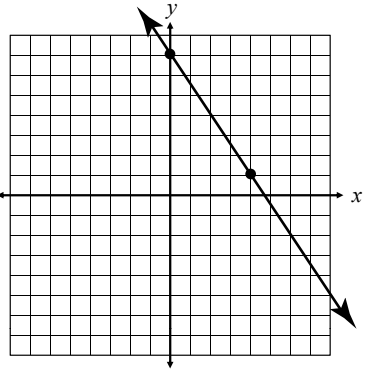
Examples

Directions: Given the slope and y-intercept of the line, write the equation in slope-intercept form.

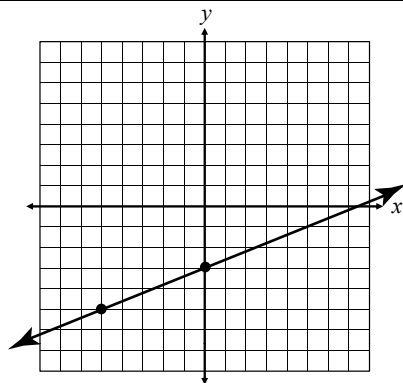
- slope = 2; y-intercept = -1 _____
- slope = $-\frac{3}{5}$; y-intercept = 4 _____
- slope = -3; y-intercept = 2 _____
- slope = -1; y-intercept = 7 _____
- slope = $\frac{1}{4}$; y-intercept = 0 _____
- slope = $-\frac{5}{2}$; y-intercept = -3 _____

Given a Graph

Directions: Identify the slope and y-intercept of the line on the graph. Then, write the equation of the line in slope-intercept form.

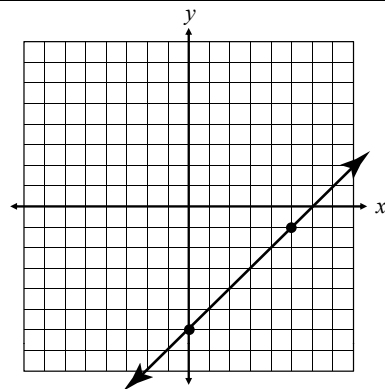
| | |
|--|--|
| <p>7.</p>  <p>$m =$ _____ $b =$ _____</p> <p>Equation: _____</p> | <p>8.</p>  <p>$m =$ _____ $b =$ _____</p> <p>Equation: _____</p> |
|--|--|

9.



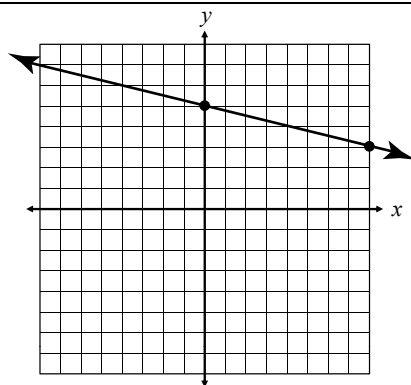
Equation: _____

10.



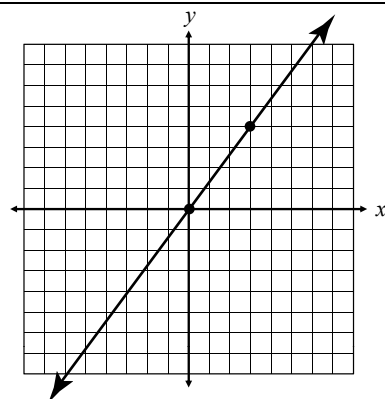
Equation: _____

11.



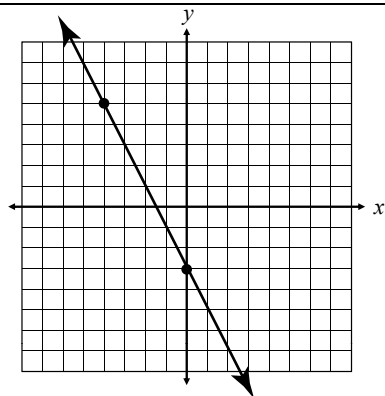
Equation: _____

12.



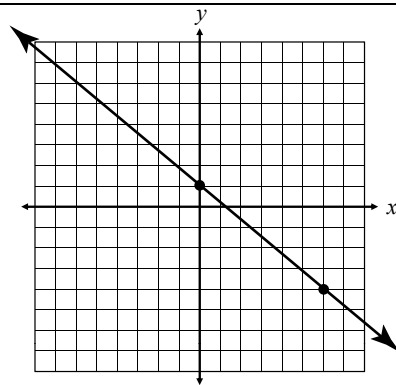
Equation: _____

13.



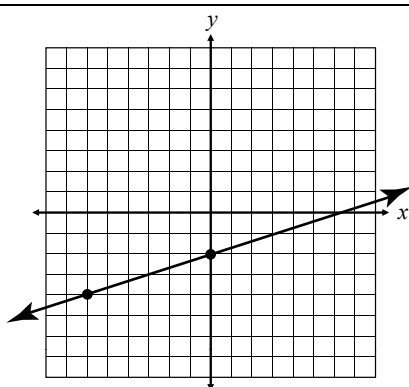
Equation: _____

14.



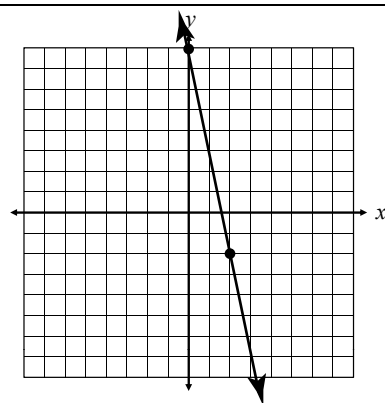
Equation: _____

15.



Equation: _____

16.



Equation: _____

Name:

Date:

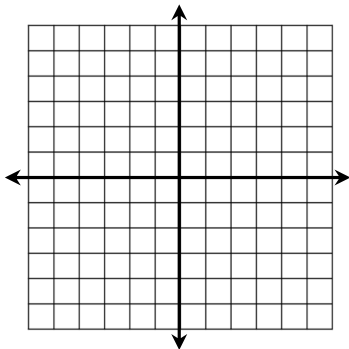
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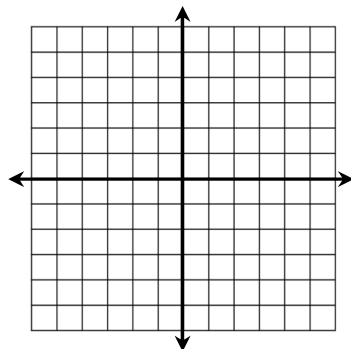
| Main Ideas/Questions | Notes/Examples |
|---|---|
| GRAPHING LINEAR EQUATIONS <i>(By Slope-Intercept)</i> | Use the steps below to graph an equation using slope-intercept form: |
| | ① Write the equation in slope-intercept form . |
| | ② Graph the y-intercept . This is always point $(0, b)$. |
| | ③ Use the slope of the line to create more points. Remember slope is rise/run! ④ Use a ruler to draw a line that extends through the points, placing an arrow on both ends. |

Directions: Graph each equation using the slope-intercept method.

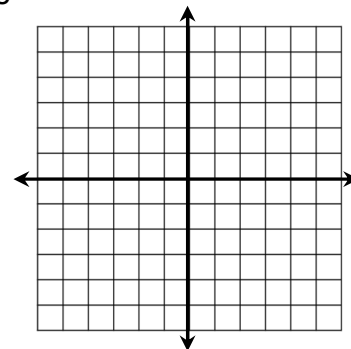
1. $y = -x + 5$



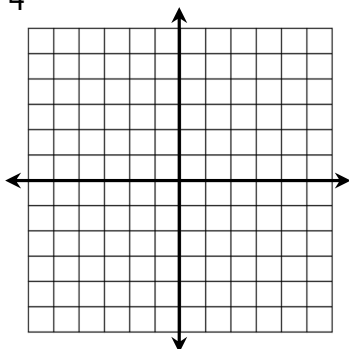
2. $y = -3x - 1$



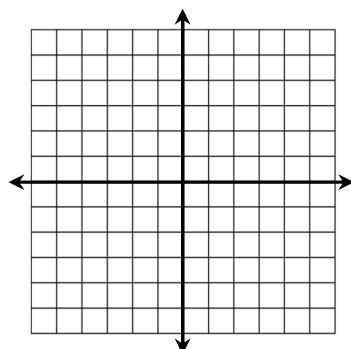
3. $y = \frac{2}{5}x + 2$



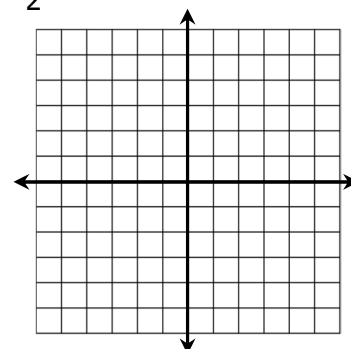
4. $y = -\frac{1}{4}x + 3$



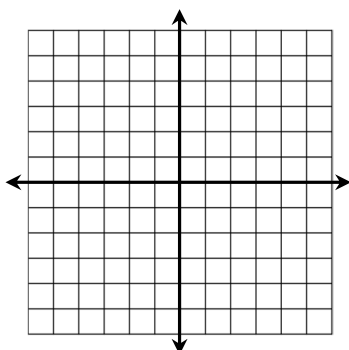
5. $y = 2x + 6$



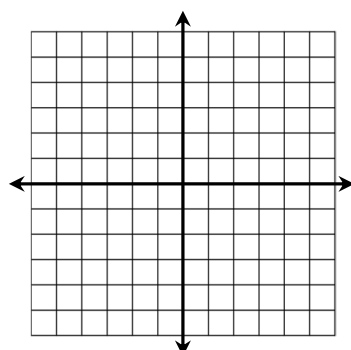
6. $y = -\frac{3}{2}x - 5$



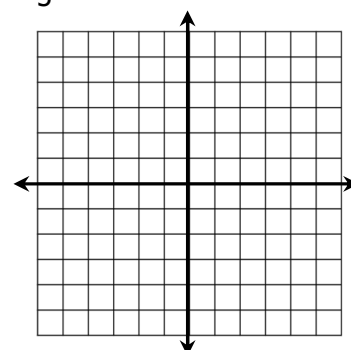
7. $y = -4x$



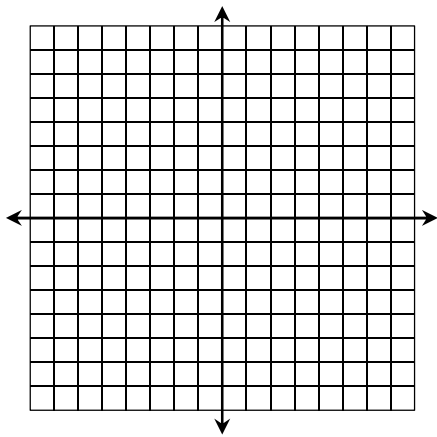
8. $y = -3 + 5x$



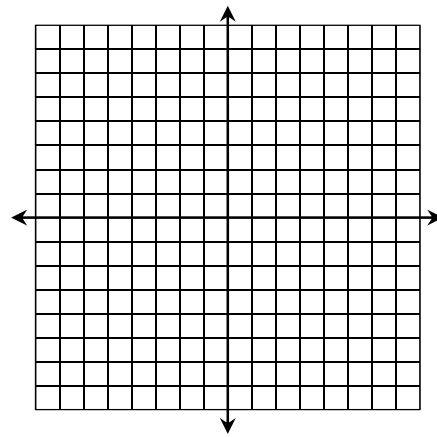
9. $y = 1 - \frac{6}{5}x$



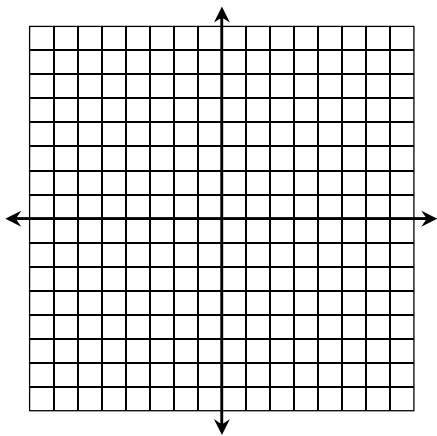
10. $x + 3y = -3$



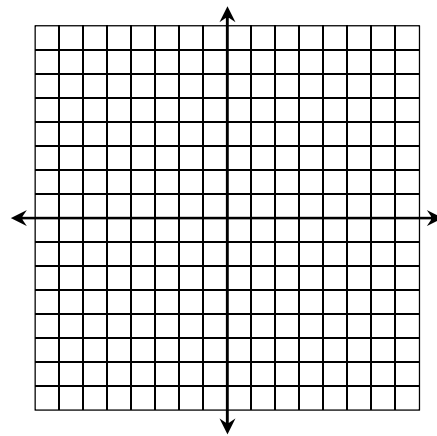
11. $x - y = -5$



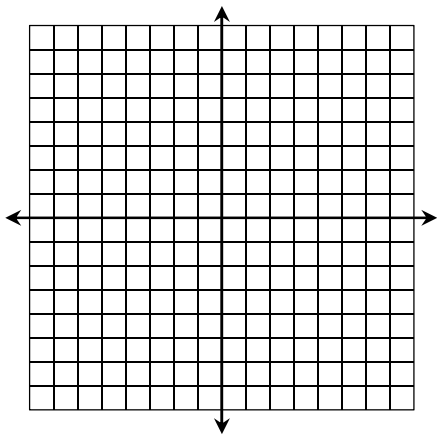
12. $5x - y = -3$



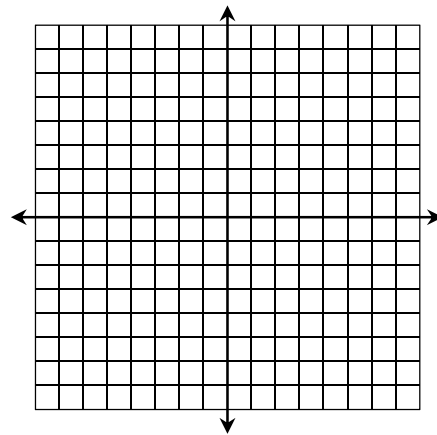
13. $4x + 3y = 21$



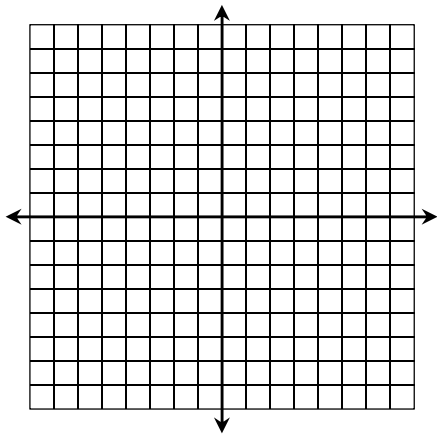
14. $2x - 4y = 20$



15. $2x + 3y = 0$



16. $10x - 8y = 24$



17. $9x + 12y = 12$

