

|              |              |
|--------------|--------------|
| Name: _____  | Date: _____  |
| Topic: _____ | Class: _____ |

| Main Ideas/Questions                                    | Notes/Examples                                                                                                                                                       |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div>SLOPE-INTERCEPT</div> <div>form</div> </div> | Most linear equations are written in <b>slope-intercept form</b> or <b>standard form</b> .                                                                           |
|                                                         | <div>Slope-Intercept Form: _____</div> <div><math>m =</math> _____; <math>b =</math> _____</div>                                                                     |
|                                                         | Given the graph, write the equation of the line in slope-intercept form.                                                                                             |
|                                                         | <div>1. </div> <div>2. </div> <div>3. </div>                                                                                                                         |
|                                                         | Graph each line.                                                                                                                                                     |
|                                                         | <div>4. <math>y = \frac{5}{4}x - 1</math> </div> <div>5. <math>y = -x + 6</math> </div> <div>6. <math>y = 2x</math> </div>                                           |
| <div>STANDARD</div> <div>form</div>                     | <div>Standard Form: _____</div> <div>Because standard form does not give you slope (<math>m</math>), you must be able to convert them to slope-intercept form.</div> |
|                                                         | Write each equation in slope-intercept form.                                                                                                                         |
|                                                         | <div>7. <math>x + y = 6</math></div> <div>8. <math>5x + 2y = -2</math></div> <div>9. <math>2x - 4y = 28</math></div>                                                 |

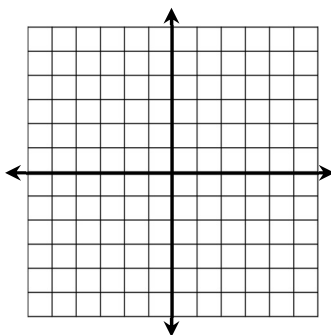
$$10. 3x - y = 5$$

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

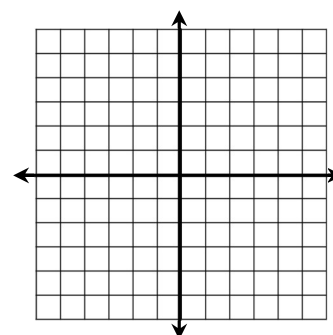
$$12. x - 4y = 0$$

Graph each line.

$$13. x - 2y = 8$$



$$14. 3x + 5y = 5$$

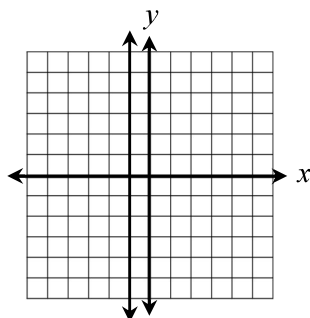


## VERTICAL & HORIZONTAL

*lines*

### VERTICAL LINES

A vertical line is written in the form  $x = a$ , where  $a$  represents the line's  $x$ -intercept.

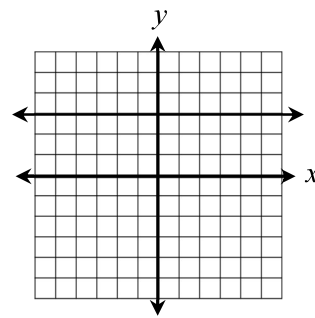


Equation: \_\_\_\_\_

Slope: \_\_\_\_\_

### HORIZONTAL LINES

A horizontal line is written in the form  $y = a$ , where  $a$  represents the line's  $y$ -intercept.

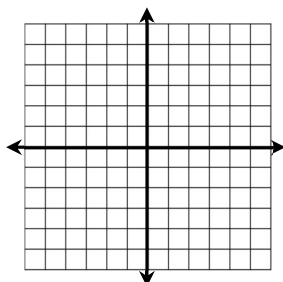


Equation: \_\_\_\_\_

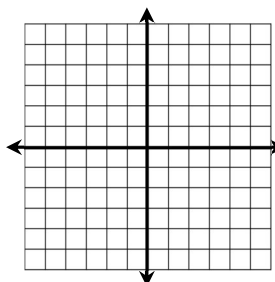
Slope: \_\_\_\_\_

Graph each line.

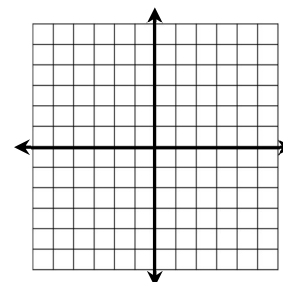
$$15. y = 4$$



$$16. x = -2$$



$$17. y = 0$$



**PARALLEL,  
PERPENDICULAR,  
or neither?**

**Determine whether the equations are parallel, perpendicular, or neither.**

18.  $y = 5x + 2$  and  $y = 5x - 1$

19.  $y = -\frac{3}{2}x + 4$  and  $y = \frac{2}{3}x - 7$

20.  $x + 2y = 2$  and  $6x - 3y = 21$

21.  $x - y = 9$  and  $y = x + 4$

22.  $3x - y = 2$  and  $y = \frac{1}{3}x - 11$

23.  $4x - 6y = 12$  and  $3x + 2y = 10$

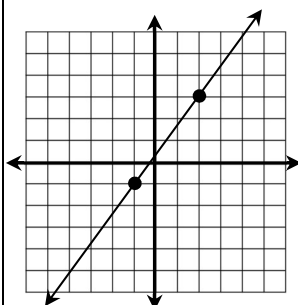
24.  $y = -\frac{1}{4}x - 5$  and  $2x + 8y = 56$

25.  $y = -4x - 2$  and  $12x + 3y = 27$

26.  $y = -7$  and  $x = 2$

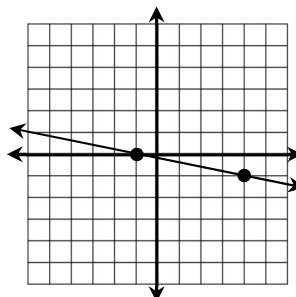
27.  $x = 9$  and  $x = -5$

28. Which line is parallel to the line shown below?



- A.  $3x + 4y = -4$
- B.  $3x - 4y = 12$
- C.  $4x + 3y = -6$
- D.  $4x - 3y = 15$

29. Which line is perpendicular to the line shown below?



- A.  $5x - y = 3$
- B.  $5x + y = -7$
- C.  $x - 5y = 30$
- D.  $x + 5y = -10$