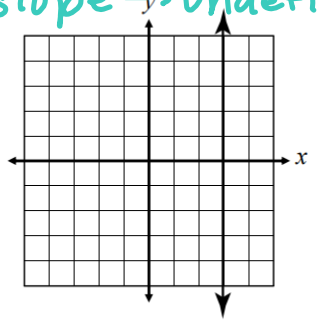
VERTICAL & HORIZONTAL LINES

Vertical & Horizontal Lines

Vertical Lines

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

slope → undefined



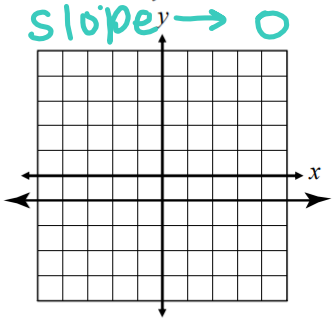
The equation of the vertical line graphed above is

$x = 3$

Horizontal Lines

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

slope → 0



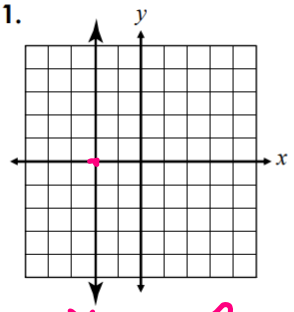
The equation of the **horizontal** line graphed above is

$y = -1$

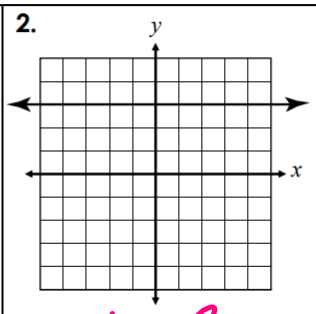
Remember, if the line intersects the x-axis**, it's $x = a$, if a line intersects the y-**axis**, it's $y = a$.**

examples

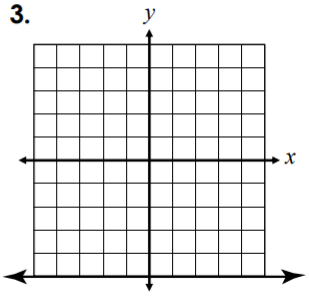
Directions: Write the equation of the line shown on the graph.

1. 

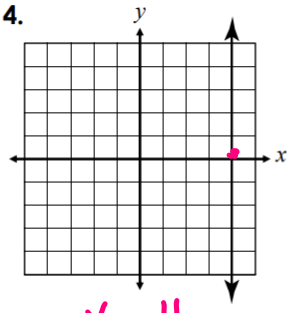
$x = -2$

2. 

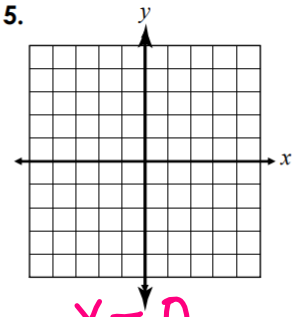
$y = 3$

3. 

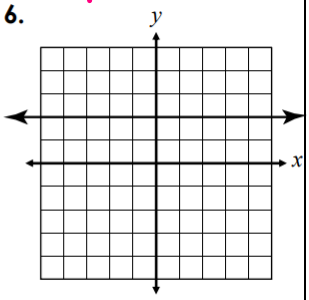
$y = -5$

4. 

$x = 4$

5. 

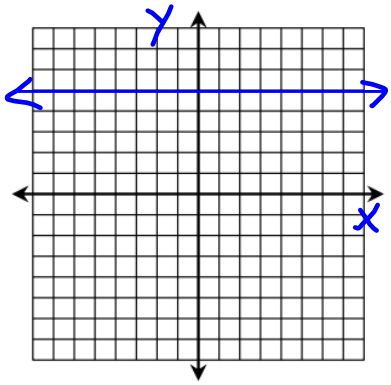
$x = 0$

6. 

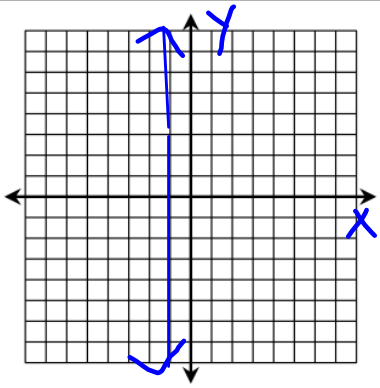
$y = 2$

Directions: Graph each equation.

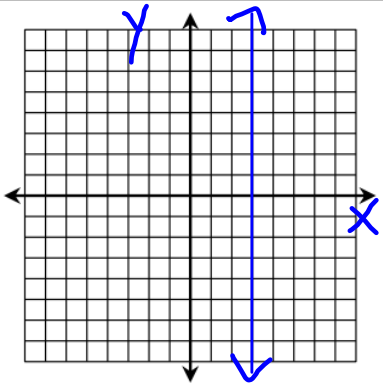
7. $y = 5$



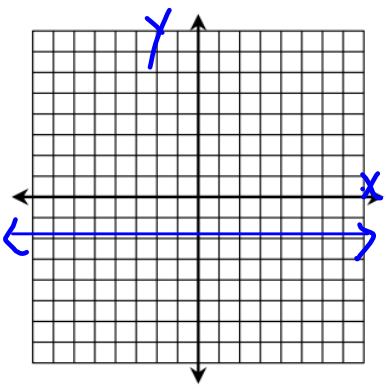
8. $x = -1$



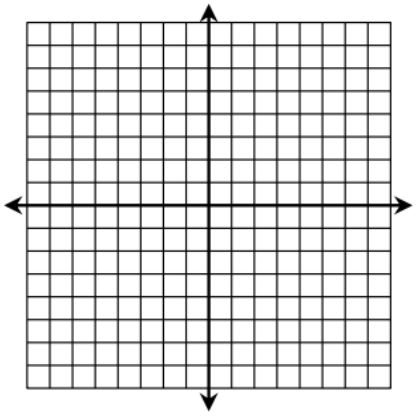
9. $x = 3$



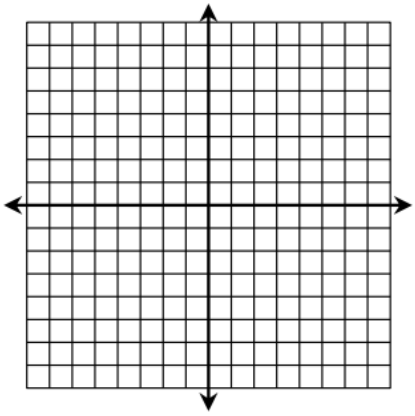
10. $y = -2$



11. $y = 4$



12. $x = -7$



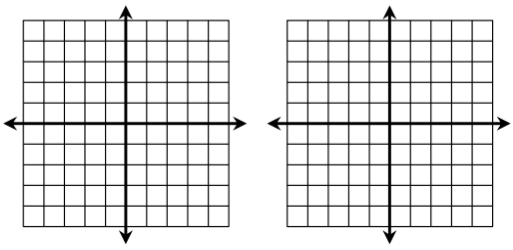
QUESTIONS

13. What is the slope of the line $y = 4$? hor $m = 0$

14. What is the slope of the line $x = -2$? vert undefined

15. What is the slope of the line $x = 0$? vert undefined

16. Which axis is $y = -1$ parallel to? hor X-axis

17. Which axis is $x = 4$ parallel to? vert Y-axis

18. How does the graph of $y = 3$ differ from $y = 3x$? Graph both and explain.