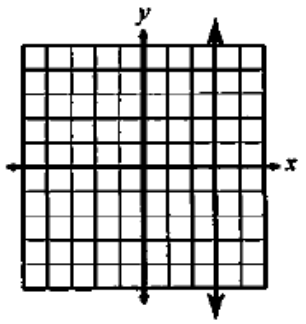
SPECIAL CASES: Vertical & Horizontal Lines

Vertical Lines

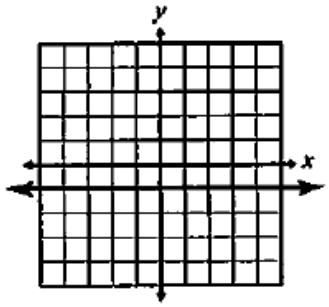
A vertical line is written in the form $x = a$, where a represents the line's x-intercept.



In this case, $x = 3$.

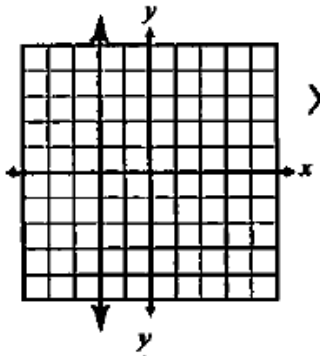
Horizontal Lines

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

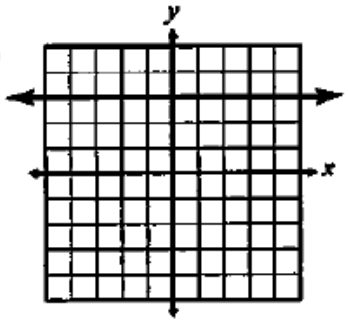


In this case, $y = -1$.

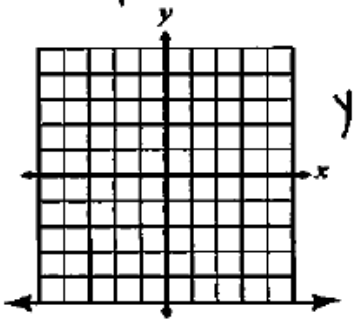
Directions: Write the equation of each line below.

1. 

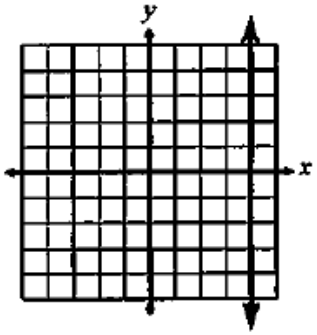
$x = -2$

2. 

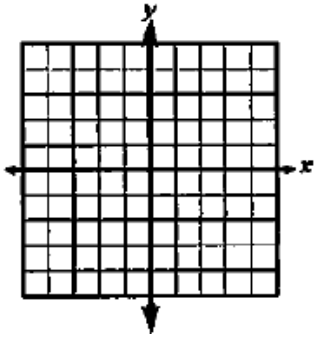
$y = 3$

3. 

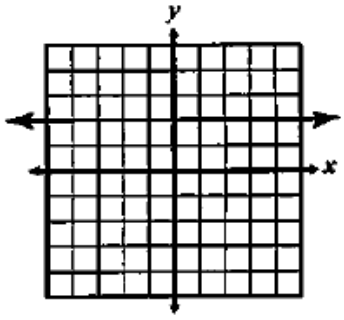
$y = -5$

4. 

$x = 4$

5. 

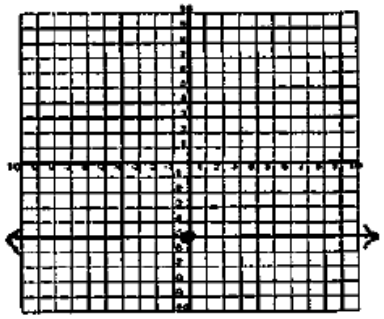
$x = 0$

6. 

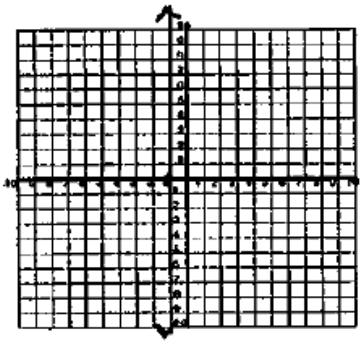
$y = 2$

Directions: Graph the vertical and horizontal lines below.

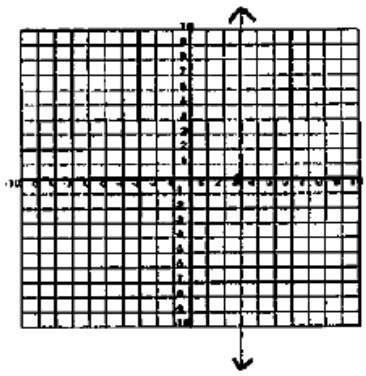
7. $y = -5$



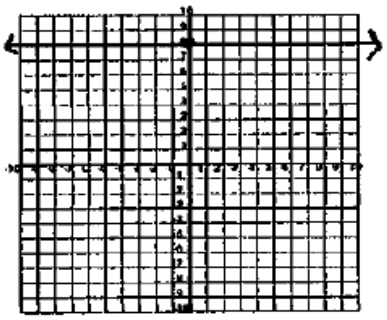
8. $x = -1$



9. $x = 3$



10. $y = 8$



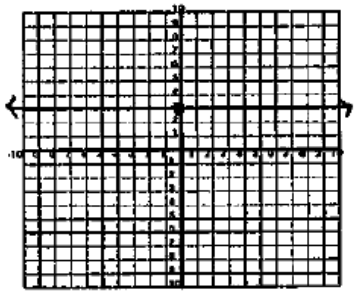
Some Questions...

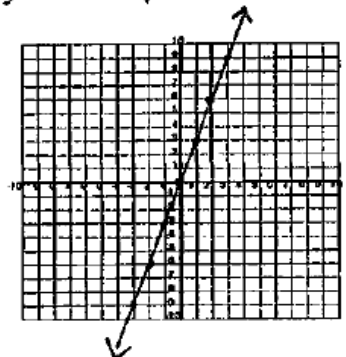
11. What is the slope of the line $y = 5$? 0

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

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

14. What is the difference between the graphs $y = 3$ and $y = 3x$? Graph both below and explain.





The first graph has 0 slope & y-intercept of 3, where as the second graph has a slope of 3 & y-intercept of 0.