

Identify the Domain and Range and determine if the relation is a function.

1.  $(-1,5), (2,3), (3,4), (2,7)$

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

**YES NO**  
(Circle one)

2.  $(1,1), (2,3), (4,7), (5,9)$

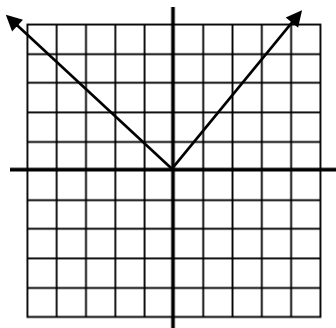
Domain: \_\_\_\_\_

Range: \_\_\_\_\_

**YES NO**  
(Circle one)

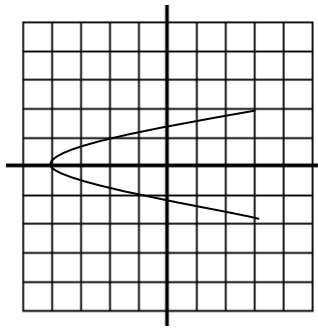
Use the vertical line test to determine if the following graphs are functions.

3.



**YES NO**  
(Circle one)

4.

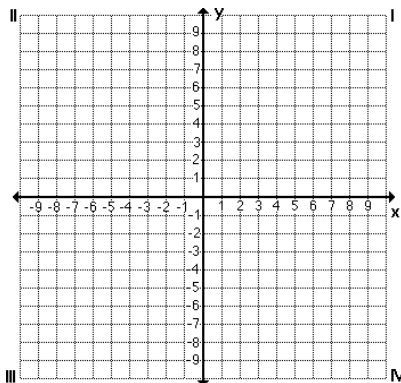


**YES NO**  
(Circle one)

Identify the slope and y-intercept, then Graph the equation.

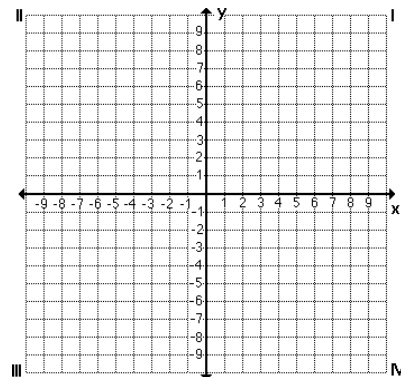
5.  $y = -3x + 1$

x	y



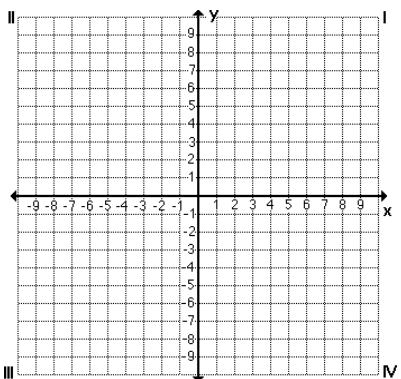
6.  $y = \frac{2}{3}x - 2$

x	y
0	
3	
6	



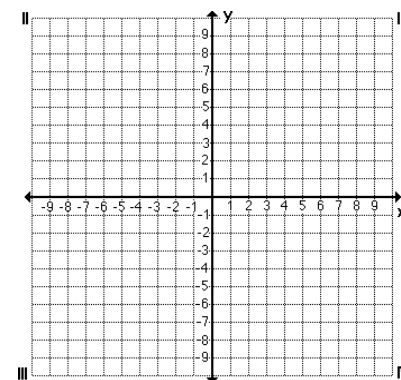
7.  $y = -2x - 2$

x	y



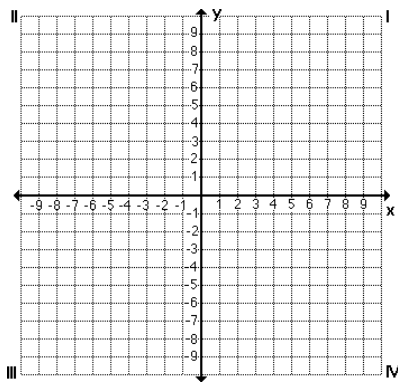
8.  $y = x + 8$

x	y



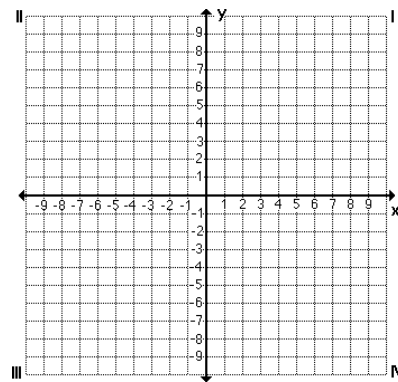
9.  $y = -x$

x	y



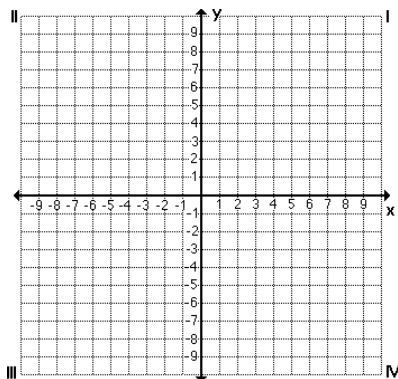
10.  $x = 7$  (Is this a HEY or VEX?)

x	y



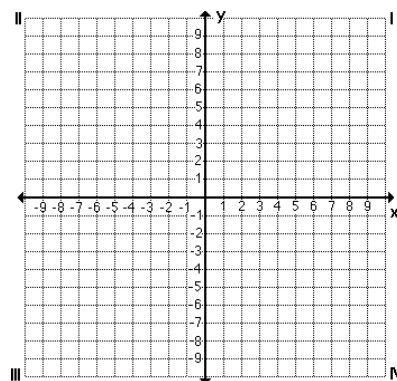
11.  $y = -5$  (Is this a HEY or VEX?)

x	y



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

x	y
0	
4	
8	



Find the slope of the line passing through the given points and describe the line as Rising, Falling, Vertical or Horizontal.  $m = \frac{y_2 - y_1}{x_2 - x_1}$

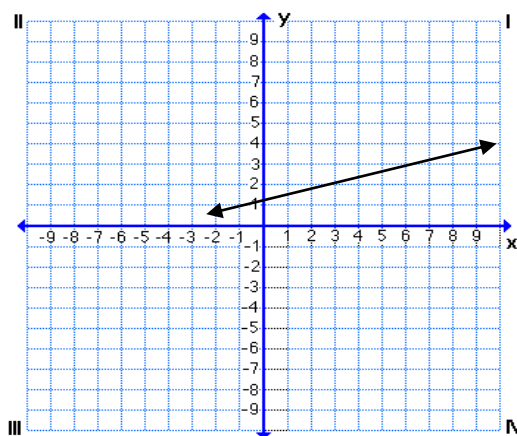
13.  $(-2, 1), (6, -9)$

\_\_\_\_\_

14.  $(2, 1), (2, 9)$

\_\_\_\_\_

15.



\_\_\_\_\_

Find the value of  $k$  so that the line through the given points has the given slope.

16.  $(1, 0)$  and  $(3, k)$ ,  $m=4$

Find the average rate of change in  $y$  relative to  $x$  for the ordered pairs. Include the units of measure for the rate of change. Rate of change =  $\frac{\text{Change in } y}{\text{change in } x}$

17. Your car's odometer showed 15 miles and there 14.25 gallons in the tank. When you returned on Sunday, the odometer read 180 miles and you still had 7.25 gallons of gas left. What was your car's average miles per gallon? (Hint: Let  $x$ =gallons and  $y$ =miles)

18. The slope of a horizontal line is:

A. No slope      B. Positive      C. Negative      D. Zero      E. None

19. The slope of a vertical line is:

F. No slope      G. Positive      H. Negative      I. Zero      J. None

20. True or False?

A vertical line is a function.

**True      or      False**

(Circle one!)