

(Sect 3.8) Rewrite all of equations to its preferred form.

1) Write equation, $8x + y = 14$, where y is a function of x .

2) Write equation, $4y - x = 20 - y$, where y is a function of x .

3) Solve for w ,
 $A = 2(l + w)$

4) Solve for p from the formula, $q = 4p - 11$

(Sect 4.2): Linear Equations. Determine whether each table is linear. If it is linear, circle yes. If not, circle no. If it is linear, identify the slope and show all work.

5) Is it linear?

x	y
0	10
1	8.5
2	7
3	5.5

Circle:
YES or NO

If yes: $m =$ _____

6) Is it linear?

x	y
0	6
3	8
6	12
9	18

Circle:
YES or NO

If yes: $m =$ _____

7) Is it linear?

x	y
1	1
3	7
7	19
10	28

Circle:
YES or NO

If yes: $m =$ _____

8) Determine whether the function LINEAR or NOT LINEAR. Then explain why.

a) $y = 6x + 4$

Is it linear? **YES or NO**

Why? _____

b) $y = 2x^2$

Is it linear? **YES or NO**

Why? _____

c) $y = -\frac{1}{2}x + 6$

Is it linear? **YES or NO**

Why? _____

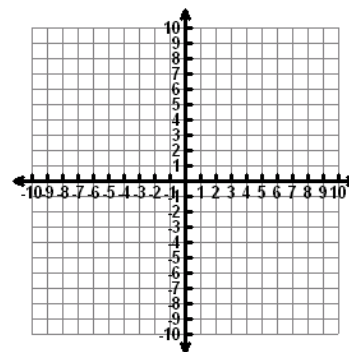
d) $y = \frac{5}{x}$

Is it linear? **YES or NO**

Why? _____

9) Graph $y + 3x = 1$ with the given domain of $\{-2, -1, 0, 1\}$

x		y
-2		
-1		
0		
1		



10) What quadrant is $(7, -1)$ in? _____

11) What quadrant is $(-4, 0)$ in? _____

(Sect 4.4) Identifying the slope of the points.

12) $(10, -6)$ & $(-8, -8)$

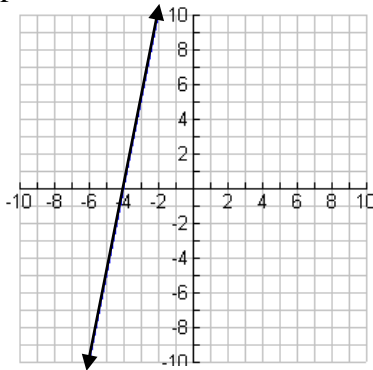
13) $(3, 2)$ & $(-1, 22)$

14) $(-6, 4)$ & $(2, 4)$

15) $(3, 6)$ & $(3, -9)$

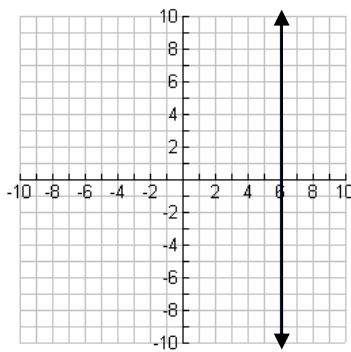
16) $(-k, 11k)$ & $(2k, 10k)$, $k \neq 0$

17) Determine the slope from a graph:



$m =$ _____

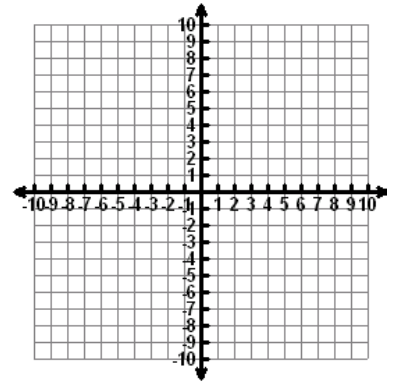
18) Determine the slope from a graph:



$m =$ _____

19) Draw a line with the slope of

$$m = -\frac{1}{5} \text{ starting at } (0, 0)$$



(Sect 4.3) Determine the intercepts. Make sure to write it correctly or it will be counted incorrect.

20) $-x + 5y = 15$

x -intercept = _____

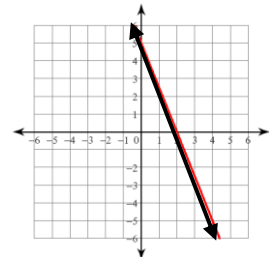
y -intercept = _____

21) $2x - 9y = 18$

x -intercept = _____

y -intercept = _____

22)



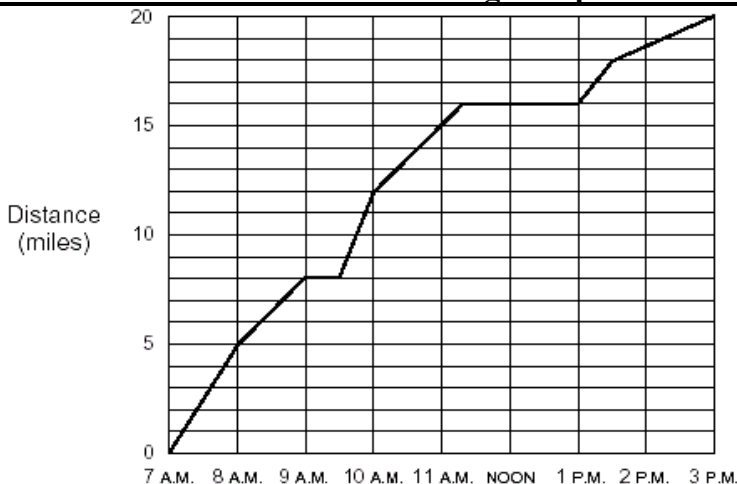
x -int. = _____ y -int. = _____

23) If $(x, 10)$ is a solution to the equation, $2x + y = 75$, what is the value of x ? _____

24) Sara is planning a trip to California in the Spring. The round-trip plane ticket is \$450 and the hotel costs \$135 per night. The total cost of the trip can be expressed as a linear function, depending on the number of nights she stays. What is the slope of the graph of this linear function?

25) A plane at an altitude of 33,000 feet begins its descent for landing. It descends 100 feet every 10 minutes until it is on the ground. The elevation, y , is a linear function of the number of minutes, x the plane is descending. What does the slope of the function represent?

Use the table to answer the following two questions about a hiking trip?



26) What is the slope between 10am and 12pm?

27) At what times did he take a break? What type of slope does this represent?

Time