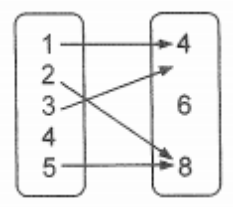
Homework Day 1

1. Determine whether each relation is a function. If it is, give the domain and the range.

   a) {(3, -1), (3, 0), (-3, 4), (3, 8), (-2, 8)}

   b) {(-2, -3), (0, -1), (0, 1), (-2, 5), (6, 4)}

   c)

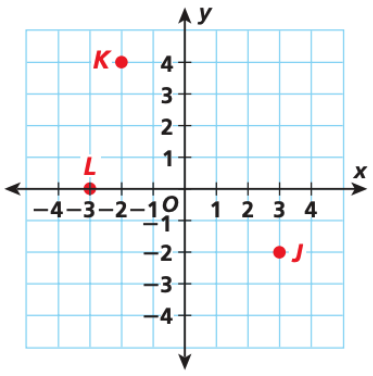


2. Find the range of each function.

   a) $f(x) = 5x - 8$
   $D = \{-1, 0, 1\}$

   b) $g(x) = 1 - \frac{1}{2}x$
   $D = \{-4, 0, 4\}$

3. Give the coordinates of each point and identify the quadrant that contains each point.



   a) J =

   b) K =

   c) L =

4. Plot each point on a coordinate plane.

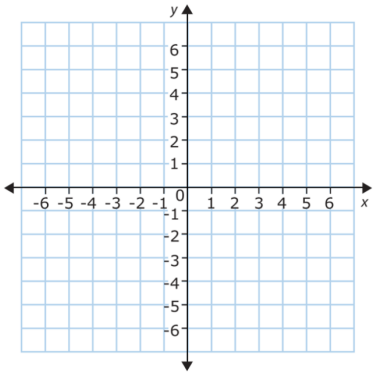
A (-1, 1)

M (2, -2)

W (-5, -5)

G (0, -3)

V (5,-6)



5. Multiple choice: which point lies in Quadrant II of the coordinate plane?

a) (4, 2) b. (4, -2) c. (-4, 2) d. (-4, -2)

6. Abe and Carlos left the library at the same time. Abe walked 4 blocks north and 5 blocks west. Carlos walked 4 blocks east and 4 blocks north. How far apart were they?

7. To plot (7, -2) a student started at the origin and moved 7 units left and 2 units down. What did the student do wrong?

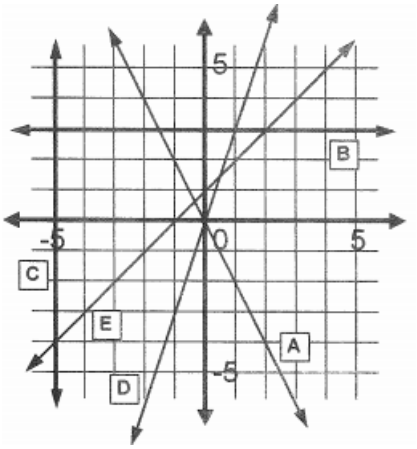
8. Find the slope of the line that contains each pair of points.

a) (2, 3), (-1, 3) b. (-1, -2), (2, -5)

Homework Day 2

1. Martin left home and walked 5 blocks north, 5 blocks west, 5 blocks south, and 5 blocks east. Where did he end up?

2. Write the equation for each graph.



   a) Line A

   b) Line B

   c) Line C

   d) Line D

3. Find the equation for each table.

a)

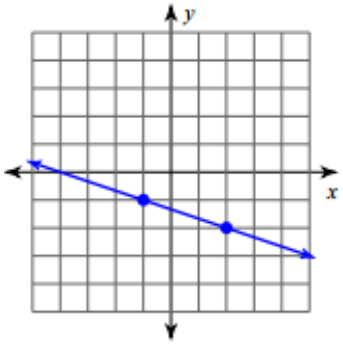
y	4	7	10	13
x	1	2	3	4

b)

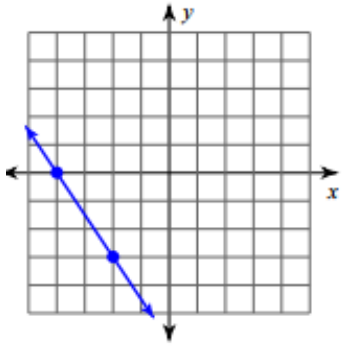
y	18	21	24	27
x	1	2	3	4

4. Find the slope of each line.

a)



b)



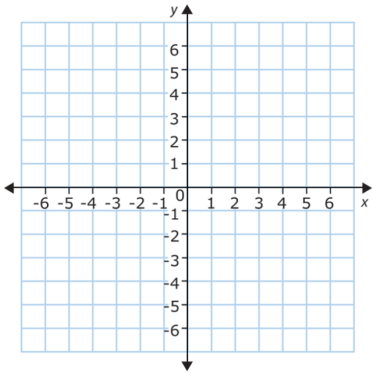
c) $y = -5x - 1$

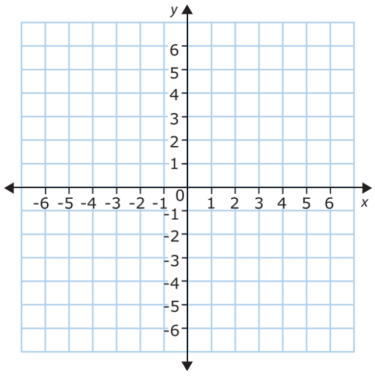
d) $y = -x + 2$

5. Find the x-intercept and the y-intercept. Then graph the equation.

a) $y = \frac{1}{3}x - 2$

b) $y = -\frac{1}{2}x - 2$

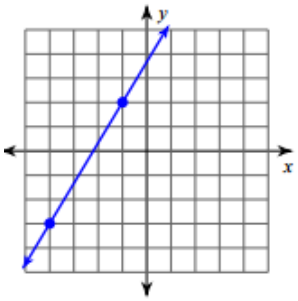




Homework Day 3

1. Find the slope of each line.

a)



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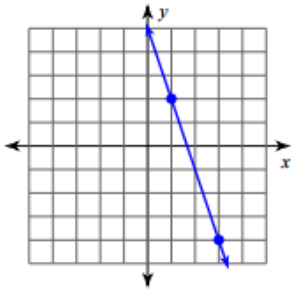
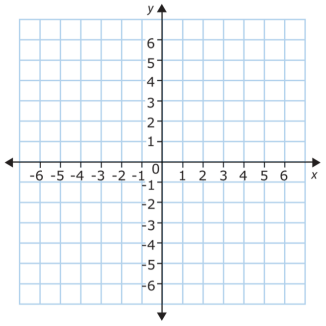


c) $y = -\frac{1}{5}x - 4$

d) $9 = 2x + 3y$

2. Graph the line that has an x-intercept of -5 and a slope of $\frac{2}{5}$ in the coordinate plane below.

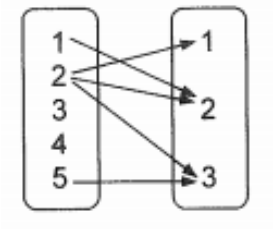


3. Circle *true* or *false* for each statement.

a) Every relation is a function T / F
b) Every function is a relation T / F
c) A function relates each of its outputs to exactly one input T / F

4. Determine whether each relation is a function. If it is, give the domain and the range.

a)



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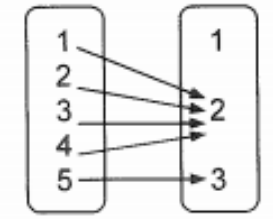


c) {(-4, -2), (-1, -12), (4, 2), (2, 1), (7, 72)}

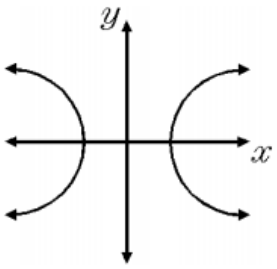
d) {(-7, -8), (-2, 0), (0, 2), (3, 5), (-2, 10)}

5. Use the vertical-line test to tell whether the relation is a function.

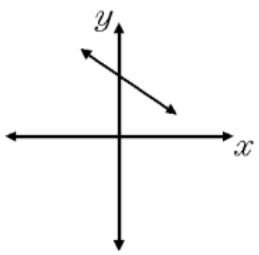
a)

Input	Output
–7	4
–2	6
–1	–1
–1	3
0	5
1	5

b)



c)



6. Find the values for the function with the set of real numbers as the domain.

$$f(x) = x^3 - x$$

a) $f(0)$

b) $f(1)$

c) $f(2)$

Homework Day 4

1. Find the slope of the line that contains each pair of points.

   a) $(5, -2), (4, -3)$

   b) $(7, 3), (3, -9)$

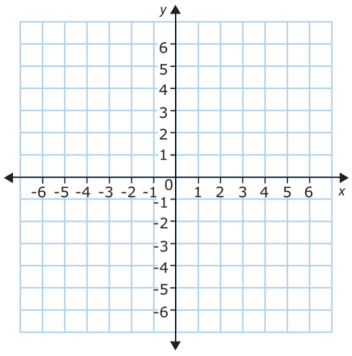
   c) $(5, 6), (2, -2)$

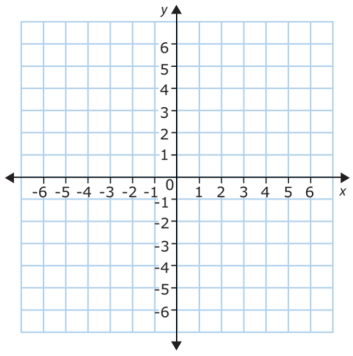
   d) $(\frac{7}{2}, 3), (\frac{11}{2}, 3)$

2. Graph the equation using a table.

   a) $y = \frac{3}{2}x + 1$

   b) $y = -x$





3. Multiple choice: Which set of ordered pairs forms a horizontal line?

   A. (4, 2), (-4, 2)
   B. (-3, 5), (-2, 4)
   C. (-8, 5), (2, 4)

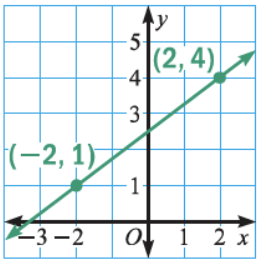
4. Mel's Pizza Place charges $15.00 for a large cheese pizza plus $1.25 for each additional topping. Write a linear function. What will be the cost of a large pizza with 3 additional toppings?

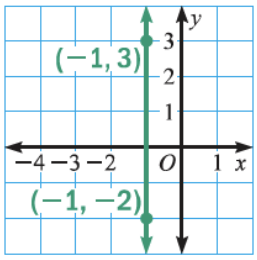
5. The temperature of a swimming pool is 75F. When the pool heater is turned on, the temperature rises 2F every hour. Write a linear function. What will the temperature be after 2 hours?

6. Multiple choice: The change in x-coordinate is -3. What can you tell about the slope?
   a) The slope must be negative
   b) The slope must be positive
   c) Cannot tell anything about the slope

7. The slope of a line is $-\frac{1}{2}$. What is the change in y-coordinates while the change in x-coordinates is 4?

8. Tell whether the slope of the line is positive, negative, zero, or undefined. Then find the slope.

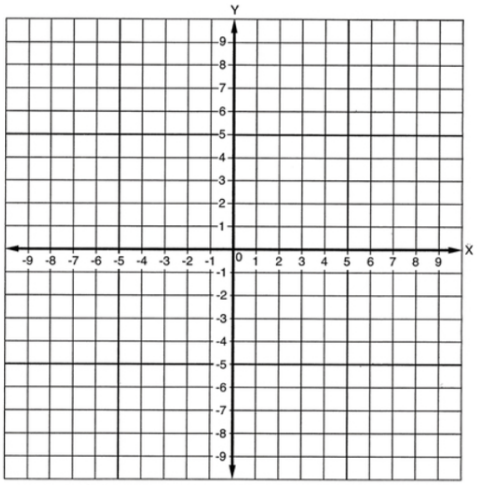
   a) 

   b) 

Homework Day 5

1. Graph the two equations (Line A and Line B) **on the same graph** by using tables. Then answer the questions.

   Line A : y = 3x – 4 Line B : y = –x + 4



   a) Which line has the higher value for the slope?

   b) What is the x-intercept for Line A?

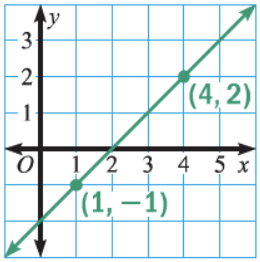
   c) What is the y-intercept for Line A?

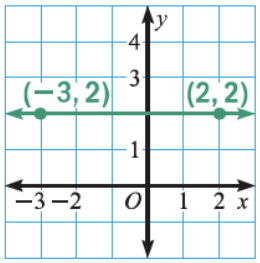
   d) What is the x-intercept for Line B?

   e) What is the y-intercept for Line B?

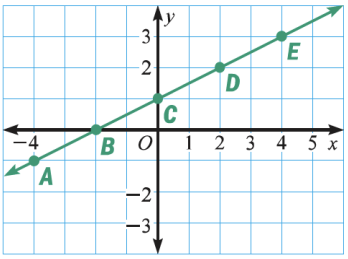
2. Multiple choice: Which set of ordered pairs forms a vertical line?
   a) (-4, 7), (-5, 3)
   b) (-5, 6), (-5, 0)
   c) (-8, 3), (3, -8)

3. Tell whether the slope of the line is positive, negative, zero, or undefined. Then find the slope.

a) 

b) 

4. Choose three different pairs of points on the given line, and find the slope of the line using each pair. What conclusion can you draw from your results?



5. Find the x-intercept and y-intercept for the graph of each equation.

a) $y = 2x - \frac{2}{3}$

b) $y = \frac{1}{2}x + \frac{2}{3}$

c) $y = -3x + 15$

d) $y = 2 - 3x$