

ALEKS® Lines and Functions Quiz #1

Beginning and Intermediate Algebra Combined / MATH 102 - Fall 2014 – 504 (Prof. Miller)

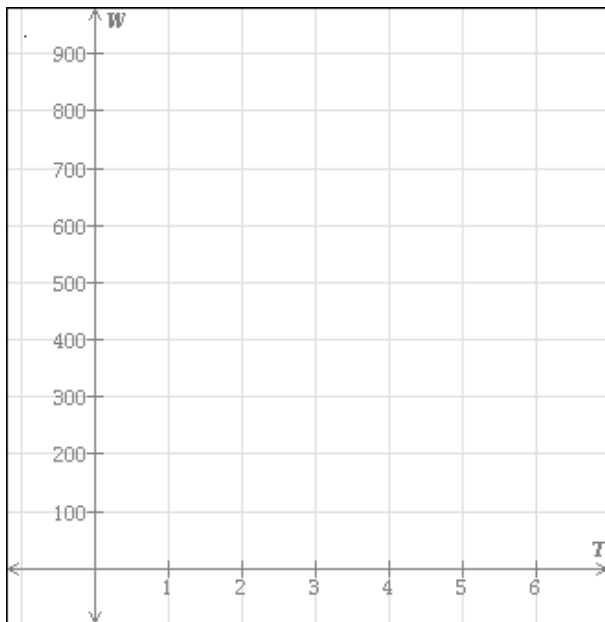
Student Name/ID:

Instructor Note:

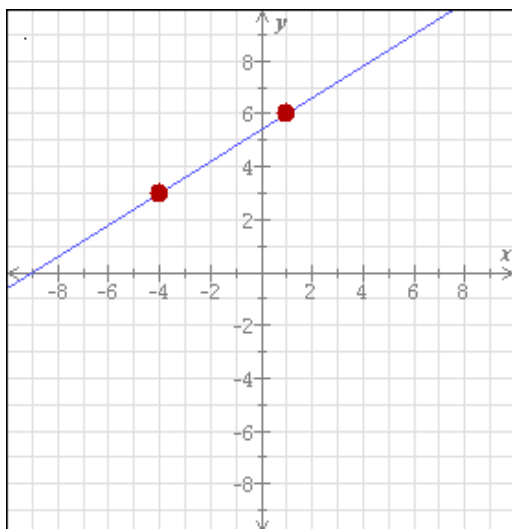
Directions: Every problem is worth two points. One point is for trying the problem and showing your work and one point is for getting the correct answer. There are an additional five points for demonstrating the study strategy that is posted on the board and talked about at the beginning of class.

1. Owners of a recreation area are filling a small pond with water. They are adding water at a rate of 35 liters per minute. There are 700 liters in the pond to start.

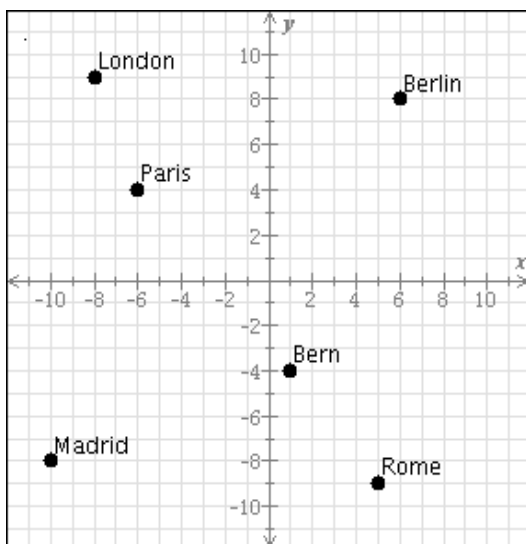
Let W represent the amount of water in the pond (in liters), and let T represent the number of minutes that water has been added. Write an equation relating W to T and then graph your equation using the axes below.



2. Find an equation for the line below.



3. Give the location of Rome as an ordered pair (x, y)



4. The equation of a line is given below.

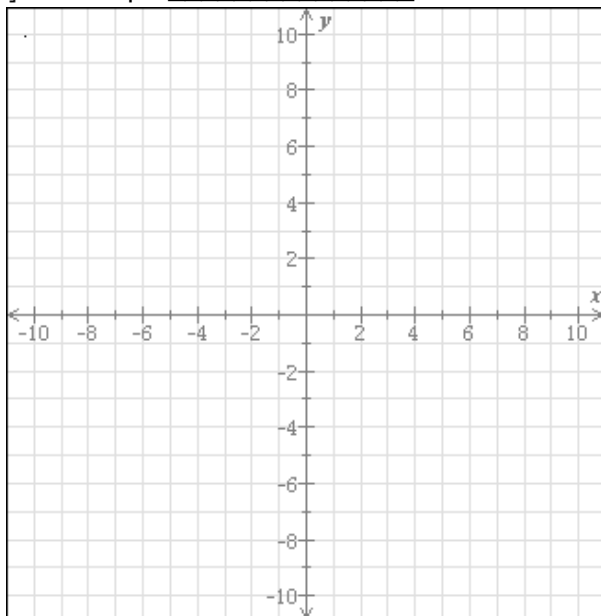
$$-3x - 5y = -15$$

Find the slope and the y -intercept.

Then use them to graph the line.

slope: _____

y -intercept: _____



5. Suppose that the relation T is defined as follows.

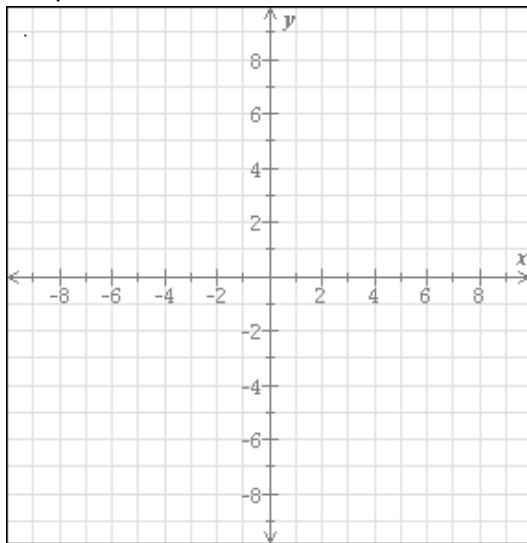
$$T = \{ (9, -8), (0, 9), (-7, 4), (-7, -5) \}$$

Give the domain and range of T

Write your answers using set notation.

6. Find the slope of the line passing through the points $(-9, -6)$ and $(-4, 5)$

7. Graph the line $x = -1$



8. Find the x -intercept and y -intercept of the line.

$$6x - 8y = -15$$

x -intercept: _____

y -intercept: _____

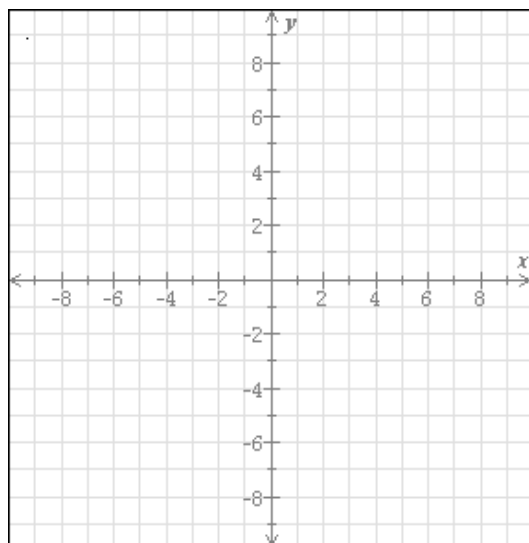
9. Write equations for the horizontal and vertical lines passing through the point $(-8, 1)$

horizontal line:

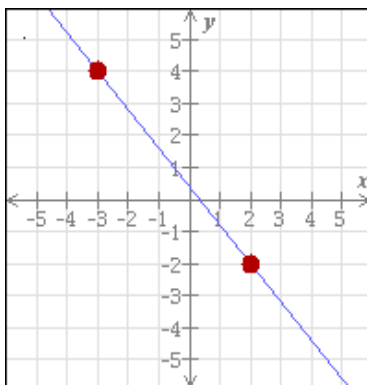
vertical line:

10. Graph the line.

$$y = 2x - 6$$



11. Find the slope of the line graphed below.



12. Find an ordered pair (x, y) that is a solution to the equation.

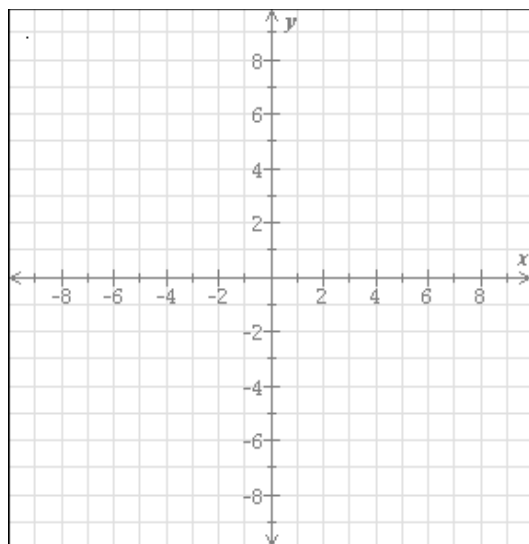
$$2x - y = 3$$

13. A line passes through the point $(-4, -1)$ and has a slope of $-\frac{5}{2}$

Write an equation in slope-intercept form for this line.

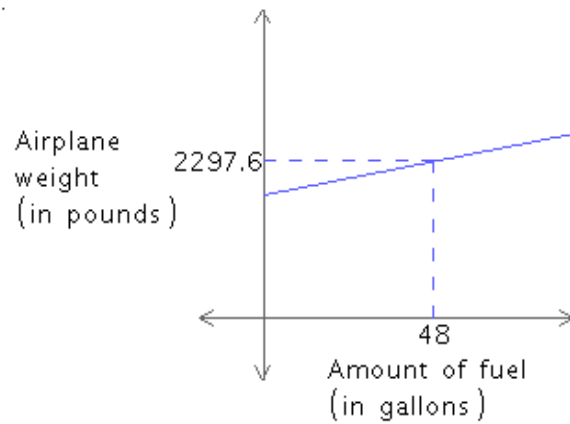
14. Graph the line.

$$-3x + y = -6$$



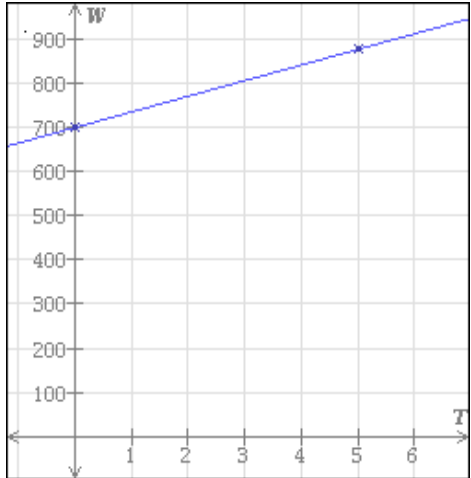
15. Suppose that the weight (in pounds) of an airplane is a linear function of the total amount of fuel (in gallons) in its tank. When graphed, the function gives a line with a slope of 6.2 . See the figure below.

With 48 gallons of fuel in its tank, the airplane has a weight of 2297.6 pounds. What is the weight of the plane with 77 gallons of fuel in its tank?



Lines and Functions Quiz #1 Answers for class Beginning and Intermediate Algebra Combined / MATH 102 - Fall 2014 – 504

1. $W = 700 + 35T$

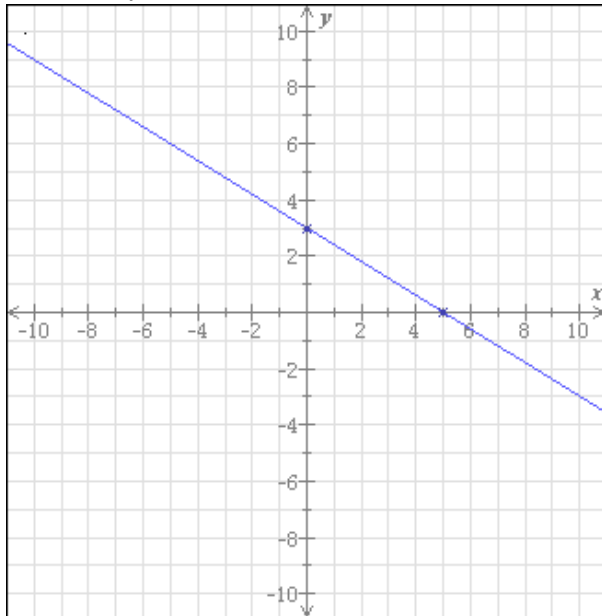


2. $y = \frac{3}{5}x + \frac{27}{5}$

3. $(x, y) = (5, -9)$

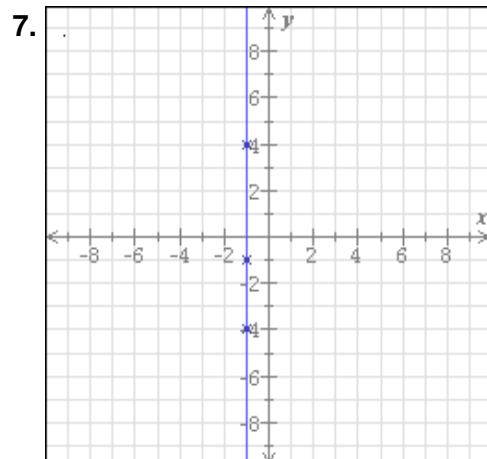
4. slope: $-\frac{3}{5}$

y-intercept: 3



5. domain = $\{9, 0, -7\}$
range = $\{-8, 9, 4, -5\}$

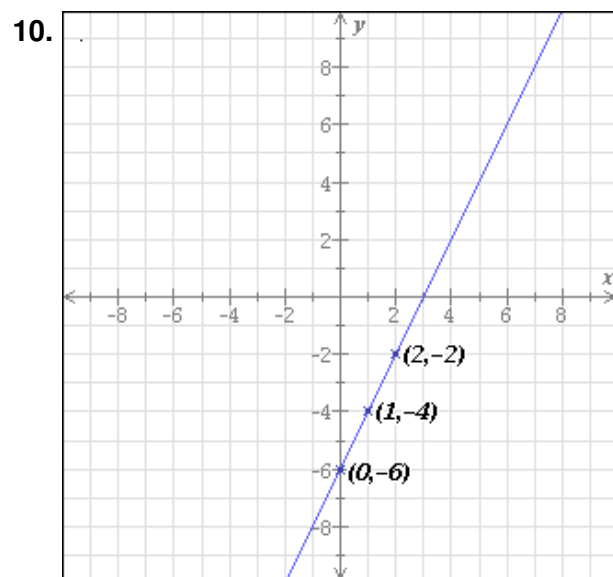
6. $\frac{11}{5}$



8. x-intercept: $-\frac{5}{2}$

y-intercept: $\frac{15}{8}$

9. horizontal line: $y = 1$
vertical line: $x = -8$

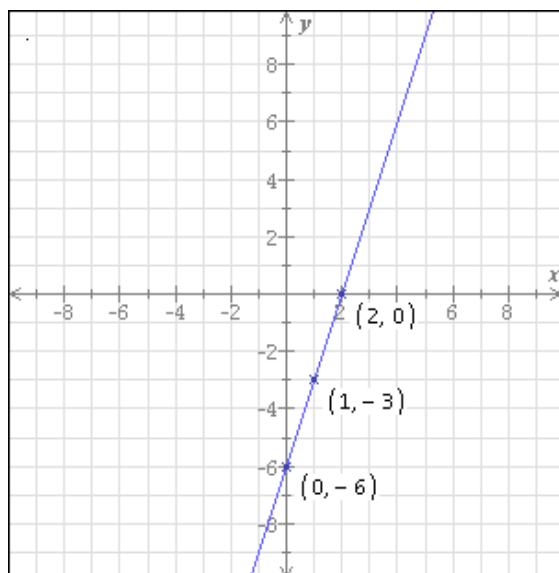


11. $-\frac{6}{5}$

12. One possible answer is $(x, y) = (0, -3)$

13. $y = -\frac{5}{2}x - 11$

14.



15. 2477.4 pounds