

Student: _____
Date: _____
Time: _____

Instructor: courtney trabue
Course: GMC LSS Mathematics
Book: Martin-Gay: Developmental
Mathematics

Assignment: MAT 097 Equations of
Lines (10.5)

1. Write an equation of the line with the given slope, m , and y -intercept $(0,b)$.

$$m = 5, b = 3$$

$y = \square$ (Use integers or fractions for any numbers in the expression.)

2. Write an equation of the line with the given slope, m , and y -intercept $(0,b)$.

$$m = -3, b = -\frac{1}{5}$$

$y = \square$ (Use integers or fractions for any numbers in the expression.)

3. Write an equation of the line with the given slope, m , and y -intercept $(0,b)$.

$$m = \frac{1}{4}, b = 0$$

$y = \square$ (Use integers or fractions for any numbers in the expression.)

4. Write an equation of the line with the given slope, m , and y -intercept $(0,b)$.

$$m = 0, b = -2$$

$y = \square$ (Use integers or fractions for any numbers in the expression.)

5. Write an equation of the line with the given slope, m , and y -intercept $(0,b)$.

$$m = -\frac{1}{4}, b = \frac{9}{10}$$

$y = \square$ (Use integers or fractions for any numbers in the expression.)

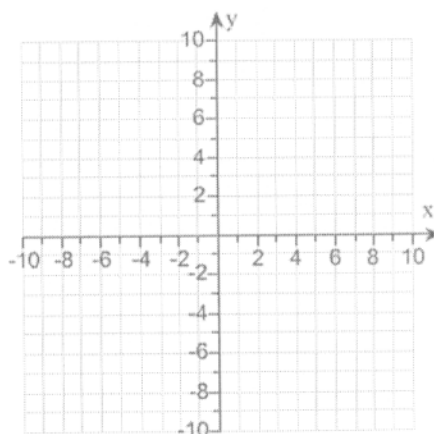
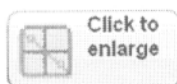
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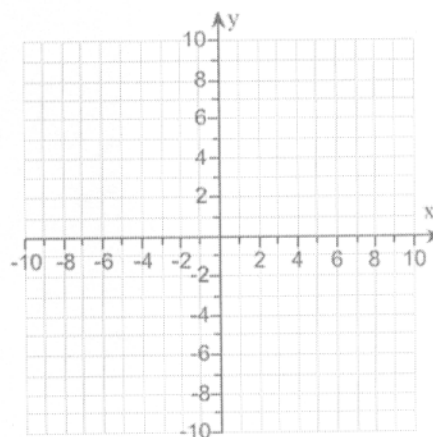
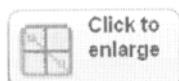
6. Use the slope-intercept form to graph the equation $y = -4x - 4$.

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



7. Use the slope-intercept form to graph the equation $y = \frac{3}{4}x - 1$.

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



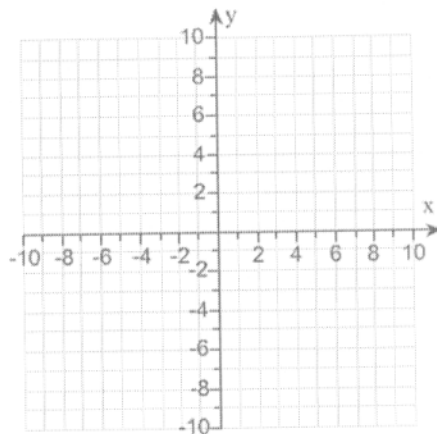
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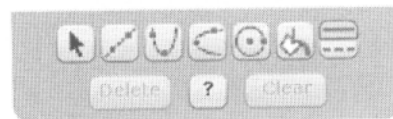
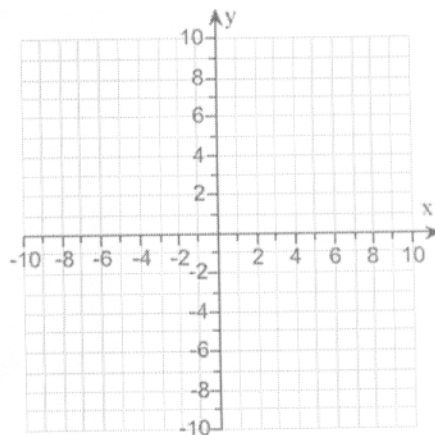
8. Use the slope-intercept form to graph the equation $-4x + y = -3$.

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



9. Use the slope-intercept form to graph the equation $5x - 3y = 15$.

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



10. Find an equation of the line with the given slope that passes through the given point. Write the equation in the form $Ax + By = C$.

$$m = 7, (5, 5)$$

The equation of the line in the form $Ax + By = C$ is .

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11. Find an equation of the line with the given slope that passes through the given point. Write the equation in the form $Ax + By = C$.

$$m = -5, (-4, -9)$$

The equation of the line in the form $Ax + By = C$ is .
(Use integers or fractions for any numbers in the expression.)

12. Find an equation of the line with the given slope that passes through the given point. Write the equation in the form $Ax + By = C$.

$$m = \frac{3}{2}, (8, -9)$$

The equation of the line in the form $Ax + By = C$ is .

13. Find an equation of the line with the given slope that passes through the given point. Write the equation in the form $Ax + By = C$.

$$m = -\frac{1}{5}, (-8, 0)$$

The equation of the line in the form $Ax + By = C$ is .
(Use integers for any numbers in the expression.)

14. Find an equation of the line passing through the pair of points. Write the equation in the form $Ax + By = C$.

$$(-8, 8), (-9, -7)$$

The equation of the line in the form $Ax + By = C$ is .
(Use integers or fractions for any numbers in the equation.)

15. Find an equation of the line passing through the pair of points. Write the equation in the form $Ax + By = C$.

$$(-6, 8), (-7, -7)$$

The equation of the line in the form $Ax + By = C$ is .
(Use integers or fractions for any numbers in the equation.)

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16. Find an equation of the line passing through the pair of points. Write the equation in the form $Ax + By = C$.

$$(0,0), \left(-\frac{1}{2}, \frac{1}{9}\right)$$

The equation of the line in the form $Ax + By = C$ is .
(Use integers or fractions for any numbers in the equation.)

17. Find an equation of the line passing through the pair of points. Write the equation in slope-intercept form.

$$(8,7), \text{ and } (7,8)$$

$$y = \text{$$

18. A fruit company is studying the sales of mixed fruit cocktail to see if this product is to be continued. At the end of its first year, profits on this product amounted to \$33,000. At the end of the fourth year, profits were \$87,000.

a. Assume that the relationship between years on the market and profit is linear and write an equation describing this relationship. Use ordered pairs of the form (years on the market, profit).

$$p = \text{} \text{ (Type an expression using } x \text{ as the variable.)}$$

b. Use this equation to predict the profit at the end of 9 years.

$$\text{The profit at the end of 9 years is } \$\text{}.$$

19. In 2001 there were 6680 electric-powered vehicles in use in the United States. In 1998 only 4760 electric vehicles were being used. (Source: U.S. Energy Information Administration)

a. Assume that the relationship between time, x , and number of electric-powered vehicles, y , is linear. Write an equation in slope-intercept form describing this relationship. Use ordered pairs of the form (years past 1998, number of vehicles).

$$\text{The equation is } \text{}. \text{ (Type your answer in slope-intercept form.)}$$

b. Use this equation to predict the number of electric-powered vehicles in use in 2006.

$$\text{ vehicles}$$

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20. In 2004 there were approximately 5420 cinema sites. In 2000 there were 6700 cinema sites.

a. Write an equation describing this relationship. Use ordered pairs of the form (years past 2000, number of cinema sites).

$C(x) = \square$ (Type an expression using x as the variable.)

b. Use this equation to predict the number of cinema sites in 2009.

$C(9) = \square$

21. The Pool Fun Company has learned that, by pricing a newly released Fun Noodle at \$4, sales will reach 8000 Fun Noodles per day during the summer. Raising the price to \$6 will cause the sales to fall to 6000 Fun Noodles per day.

a. Assume that the relationship between sales price, x , and number of Fun Noodles sold, y , is linear. Write an equation in slope-intercept form describing this relationship. Use ordered pairs of the form (sales price, number sold).

The equation is \square . (Type your answer in slope-intercept form.)

b. Predict the daily sales of Fun Noodles if the price is \$4.50.

\square sales

22. The value of a building bought in 1990 appreciates, or increases, as time passes. 5 years after the building was bought, it was worth \$133,000; 14 years after it was bought, it was worth \$169,000.

a. If this relationship between number of years past 1990 and value of building is linear, write an equation describing this relationship. [Use ordered pairs of the form (years past 1990, value of building). Let x represent the number of years since 1990 and y represent the value of the building.]

$y = \square$

b. Use this equation to estimate the value of the building in the year 2010.

\$ \square