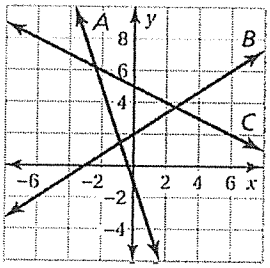
Name _____ Date _____

4.4 Class-work

Match the equation with its graph. Identify the slope and *y*-intercept.



1. $y = -\frac{1}{2}x + 5$

2. $y = -3x - 1$

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

Find the slope and the *y*-intercept of the graph of the linear equation.

4. $y = x + 4$

5. $y = -8x + 3$

6. $y = -\frac{5}{7}x - 2$

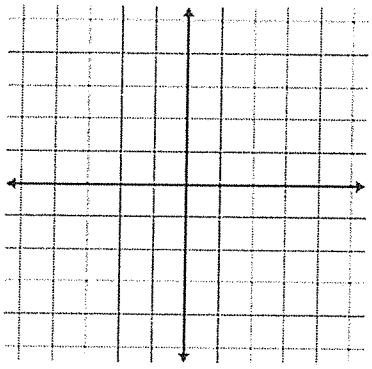
7. $y = 1.75x - 1$

8. $y - 2 = 6x$

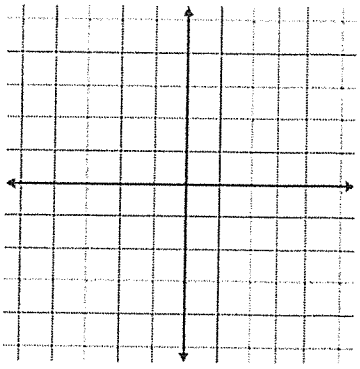
9. $y + 7 = \frac{1}{9}x$

Identify the *x*-intercept. Then graph the linear equation using the x & y intercepts.

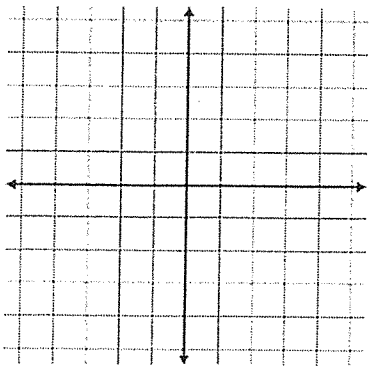
10. $y = 3x - 6$



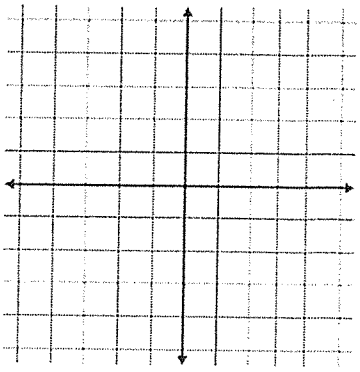
11. $y = -\frac{1}{4}x + 12$



12. $y = 3.2x + 9.6$



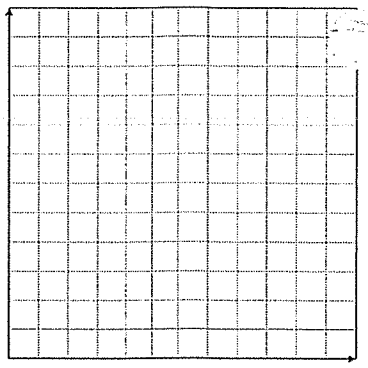
13. $y - 2 = 5x$



14. The amount of fertilizer y (in cups) that is needed for x square feet of grass is $y = \frac{1}{4}x$.

a. Graph the equation.

b. Interpret the slope.



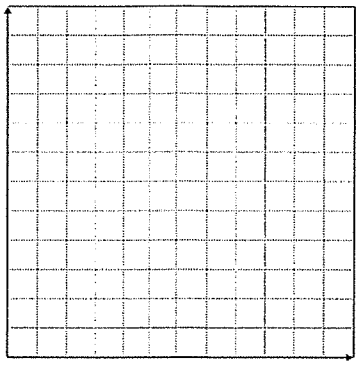
15. The depreciated value y (in dollars) of a business car after x years is $y = -4200x + 21{,}000$.

a. Graph the equation.

b. Interpret the slope.

c. Interpret the y-intercept.

d. Interpret the x-intercept

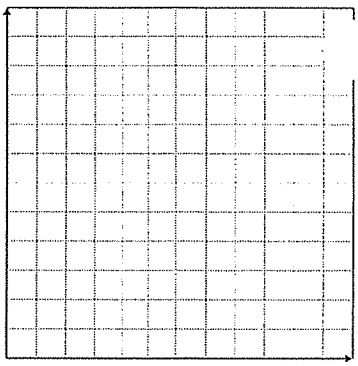


11. There is a \$10 monthly membership fee to download music. There is a \$0.50 fee for each song downloaded.

a. Write a linear equation that models the cost of downloading x songs per month.

b. Graph the equation.

c. What is the cost of downloading 15 songs?

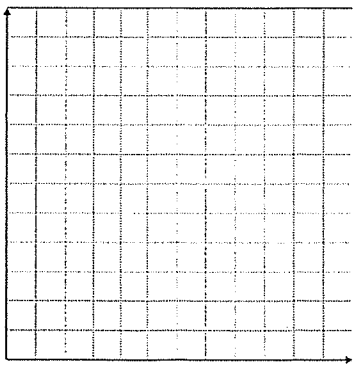


12. An entrepreneur is opening a business to market pies and pie fillings based on her family's recipes. The price of every item in the store is \$6.

a. Write a linear equation that models the amount of revenue y (in dollars) taken in for selling x items.

b. Graph the equation.

c. The monthly cost of rent and utilities for the store space is \$1100. What is the minimum number of items that must be sold each month in order to make a profit?



d. Assuming 4 weeks in a month, what is the average number of items that need to be sold each week in order to turn a profit?

Name _____ Date _____

4.5 Class-work

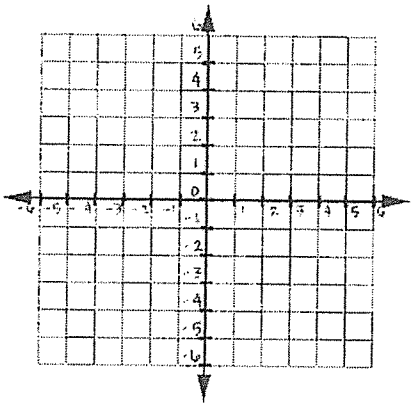
Write the linear equation in slope-intercept form.

1. $4x + y = 10$

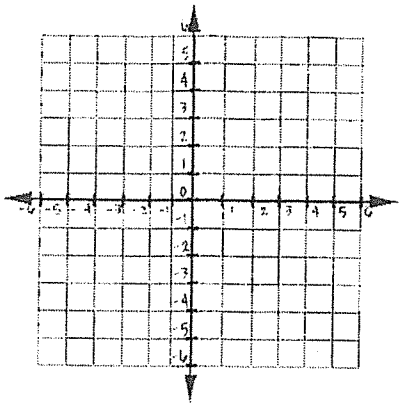
2. $3x - y = 7$

Graph the linear equation using intercepts (Keep in Standard Form).

3. $4x + y = 8$



4. $3x - 2y = 12$



5. The total amount of fiber (in grams) in a package containing x apples and y oranges is given by the equation $5x + 10y = 110$.

   a. Find and interpret the y-intercept.

   b. Find and interpret the x-intercept.

   c. How many grams of fiber does an orange contain?

   d. How many grams of fiber does an apple contain?

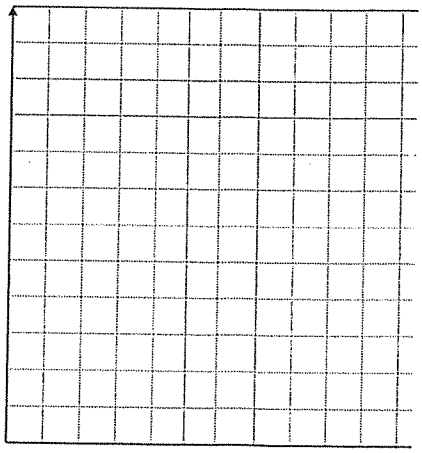
   e. Is it possible for the package to contain 15 apples? Explain.

6. You have two jobs. You earn \$8 for each hour x that you work as a host & \$6 for each hour y that you work as an aide. Your earnings for the week are \$144.

   a. Write an equation in standard form that models your earnings.

   b. Find the x- and y-intercepts.

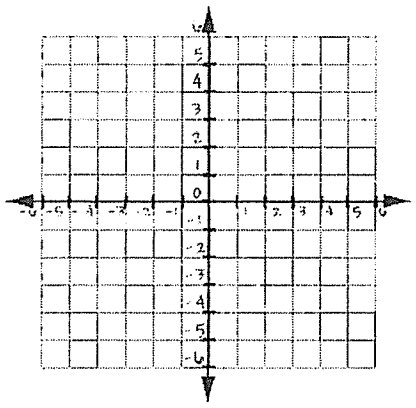
   c. Graph the equation.



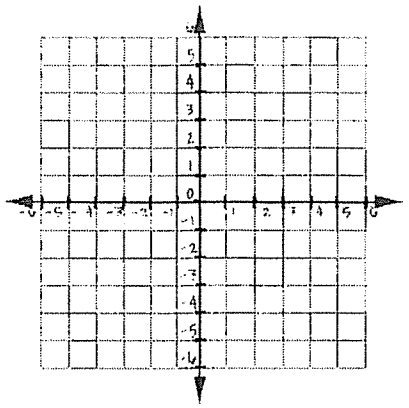
d. You worked 10 hours as an aide. How many hours did you work as a host?

Graph the linear equation using intercepts (Keep in Standard Form).

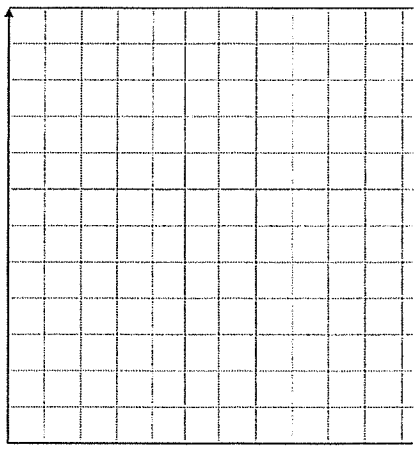
7. $\frac{1}{5}x + \frac{1}{10}y = \frac{2}{5}$



8. $2.5x - 1.25y = 5$



9. Your family is on a ski vacation. Lift tickets for the family cost \$80 per day. Snowboard rentals cost \$40 per day. You purchase lift tickets for x days and snowboard rentals for y days and spend \$480.



a. Write an equation in standard form that represents the situation.

b. Find the x- and y-intercepts.

c. Graph the equation.

d. You rent snowboards for 2 days. How many days did you purchase lift tickets?

10. An electrician charges \$80 plus \$32 per hour.

a. Write an equation that represents the total fee y (in dollars) charged by the electrician for a job lasting x hours.

b. Find the x- and y-intercepts.

c. Graph the equation.

d. Is the value of the x-intercept applicable to the electrician? Explain.