Algebra I Summer Assessment – Unit 4

Community   Personalization   Progress   Purpose

Name: _____

Unit 4 Summer Summative Assessment Answer Sheet

4.1 Plot Points in a Coordinate Plane

1._____

8. _____

9. _____

23. _____

4.2 Graph Linear Equations

7. _____

8. _____

25. _____

26. _____

38. _____

4.3 Graph Using Intercepts

4. _____

31. _____

32. _____

34. _____

4.4 Find Slope and Rate of Change

7. _____

13. _____

14. _____

25. _____

31. _____

4.5 Graph Using Slope-Intercept Form

11. _____

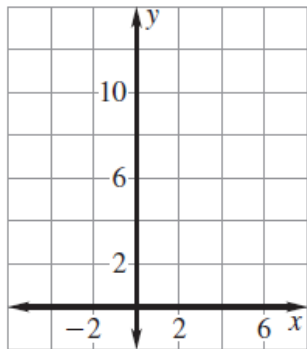13. _____

14. _____

23. _____

28. _____

4.1 Plot Points in a Coordinate Plane

Give the coordinates of the points labeled *A*, *B*, *C*, and *D*.
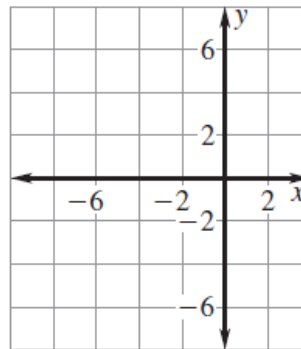
1.
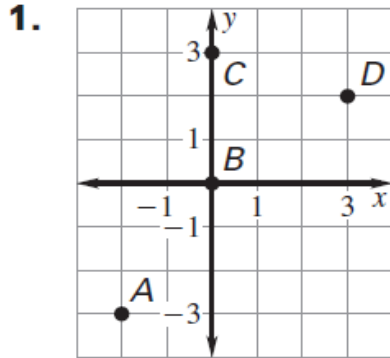
Plot the point in a coordinate plane. *Describe* the location of the point.
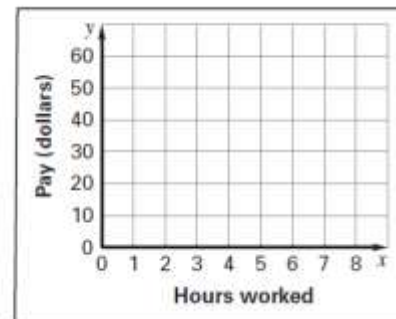
8. $S(0, 11)$

9. $T(-3, -5)$

23. Hourly Pay The table shows the number of hours worked and the corresponding pay in dollars.

Hours worked	1	2	3	5	8
Pay (dollars)	7.50	15.00	22.50	37.50	60

a. Graph the data from the table.

b. Does the graph represent a function? Why or why not?

4.2 Graph Linear Equations

Decide which of the two points lies on the graph of the line.
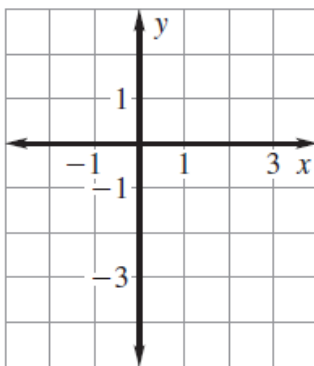
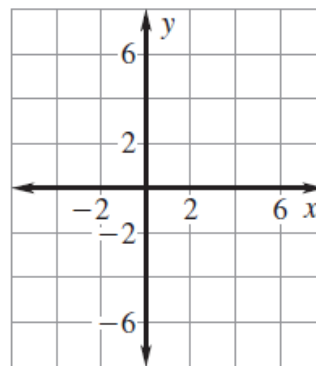**7.** $2x + 2y = 6$

    a. $(-4, 5)$ **b.** $(6, -3)$

8. $6x - 2y = -4$

    a. $(-1, -1)$ **b.** $(-3, -2)$

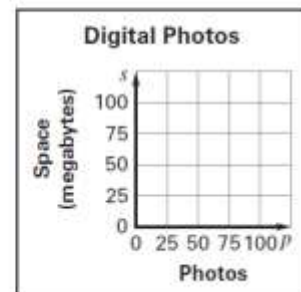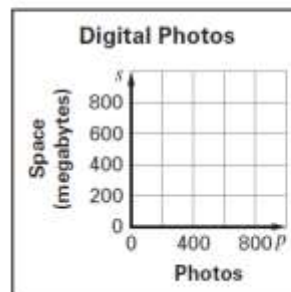## Graph the equation.

25. $x - 2 = 0$

26. $y + 5 = 0$

38. **Digital Photos** You downloaded photos from your digital camera onto your computer. Each photo takes up 2 megabytes of space. You now want to burn these photos onto a CD. The number p of photos that will fit on a CD is given by the function $s = 2p$ where s is the amount of space (in megabytes) available on a CD.

    a. One CD can store up to 700 megabytes of space. Graph the function and identify its domain and range. How many photos can you fit on one CD?

    b. Suppose you have 50 photos. Graph the function and identify its domain and range. How much space (in megabytes) will the photos take up?
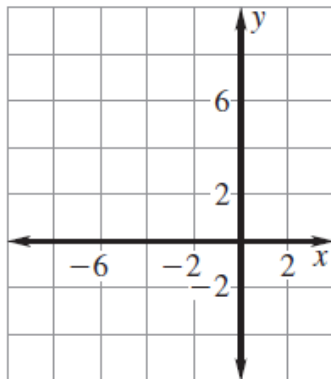
Identify the *x*-intercept and the *y*-intercept of the graph.
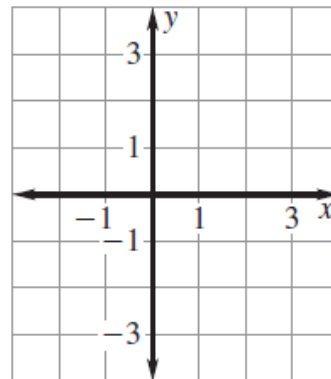
4.
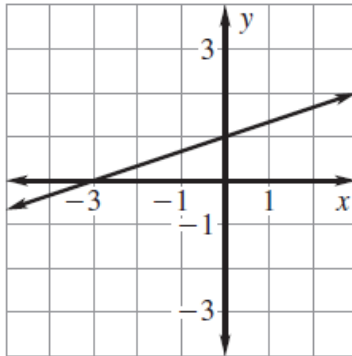
Graph the equation. Label the points where the line crosses the axes.
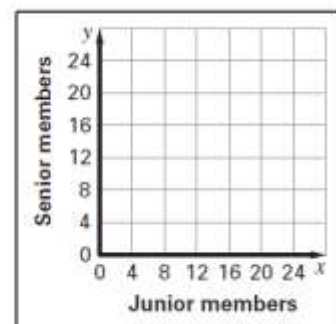
31. $y = x + 6$

32. $y = x - 3$

34. Club Membership The computer club at your school is open to juniors and seniors. There are now 24 members in the club. Let x be the number of junior members and let y be the number of senior members.

a. Write an equation for the total number of members in the club.

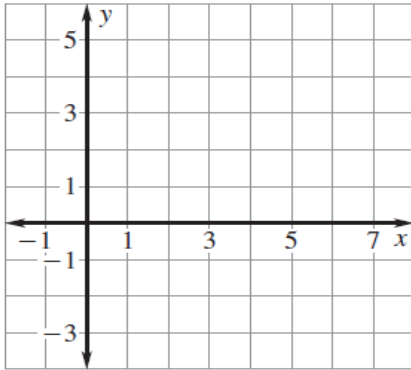**b.** Find the intercepts of the equation.

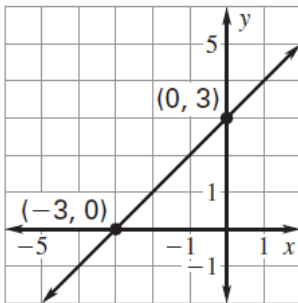**c.** Graph the equation.

4.4 Find Slope and Rate of Change

Plot the points and draw a line through them. Without calculating, tell whether the slope of the line is *positive, negative, zero,* or *undefined*.
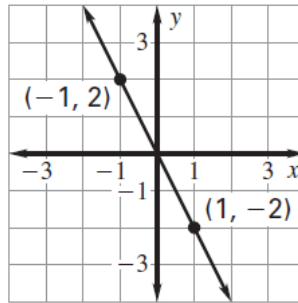
7. (1, 0) and (5, 3)

Find the slope of the line that passes through the points.

13.

14.

Find the slope of the line that passes through the points.

25. (−3, 7) and (1, −1)

31. Plant and Flower Sales The table shows the amount of money (in dollars) spent by a household on plants and flowers for certain years. Describe the rates of change in the number of dollars spent during the time period.

Year	2001	2002	2003	2004	2005
Amount spent (dollars)	127	134	139	137	136

Identify the slope and *y*-intercept of the line with the given equation.
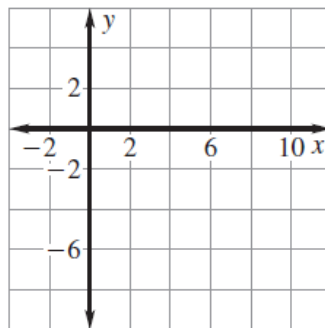
11. $y = -\dfrac{3}{4}x - 1$
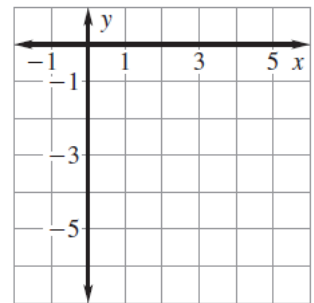
Graph the equation.

13. $y = x + 5$
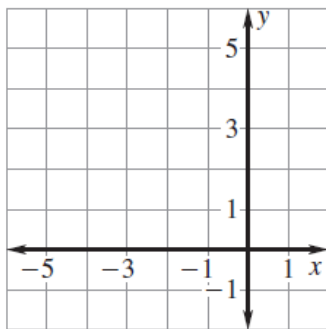
14. $y = x - 7$

23. $y = -\dfrac{1}{2}x - 4$

28. Drum Lessons You are taking drum lessons at a studio. Last year, the studio charged $10 per lesson. This year, the studio raised its rates and charges $12 per lesson. The total fee f (in dollars) for taking lessons last year is given by the equation $f = 10\ell$ where ℓ is the number of lessons you took. The total fee this year is given by the equation $f = 12\ell$. Graph the equations in the same coordinate plane. Use the graphs to find the difference between the fees a person could be charged for taking 48 lessons.