Practice 2-3

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Mixed Exercises

Use the given information to graph each line.

1. through $(2, -4)$ and $(3, -6)$ 2. through $(0, 3)$ and $(3, 0)$ 3. through $(3, 3)$ and $(-3, -3)$

4. through $(5, 1)$ and $(6, -2)$ 5. through $(-1, 2)$ and $(-2, 3)$ 6. through $(-5, 0)$ and $(-1, -1)$

Write each linear equation in standard form.

7. $2x = 3y + 4$ 8. $y = 5x - 2$ 9. $y = \frac{2}{7}x - 3$ 10. $y - x + 3 = 0$

11. $3x + 2y + 5 = 0$ 12. $5y = -3x - 8$ 13. $2y - 5x = 0$ 14. $9 - y - x = -3$

Write the equation of each line.

15. through $(2, 0)$ and $(3, 1)$ 16. through $(4, 2)$ and $(3, 6)$ 17. through $(-5, 1)$ and $(-4, 6)$

18. through $(3, -2)$ and $(2, -3)$ 19. through $(3, -3)$ and $(-3, 3)$ 20. through $(2, -2)$ and $(-2, 2)$

21. through $(2, 4)$ and x-intercept of 6   22. through $(-3, -3)$ and through the origin

23. x-intercept of -2 and y-intercept of 4   24. x-intercept of 4 and y-intercept of 5

25. y-intercept of 2 and through $(4, 1)$ 26. y-intercept of -3 and x-intercept of -5

27. While prices for color inkjet printers dropped from 1993 to 1996, revenue from color inkjet printers rose from \$739 million to \$2.9 billion.

   a. Using years past 1993 for x, and millions of dollars in revenue for y, write a linear equation to model the revenue from color inkjet printers.

   b. Use your equation to estimate the revenue in 1995.

   c. Assuming the growth of revenue remains constant, predict the revenue in 1998.

28. The population of Mytown has been increasing as people retire and move to the hills to enjoy the beauty and peace of the countryside. The planning board compiled the data below to help predict future growth.

Year	1968	1973	1979	1983	1990	1995
Population	465	710	1090	1200	1553	1815

   a. Graph the data using years past 1968 for x and the population as y.

   b. Does a linear model seem reasonable? Explain.

   c. Draw a trend line.

   d. Write an equation for the trend line in slope-intercept form.

   e. Use the trend line to predict the population in 2000.

   f. If a recreational lake is built in the next county, would you expect the trend line to be accurate? Explain.