



STANDARD FORM Graph the equation. Label any intercepts.

31. $x + 4y = 8$ 32. $2x - 6y = -12$ 33. $x = 4$
 34. $y = -2$ 35. $5x - y = 3$ 36. $3x + 4y = 12$
 37. $-5x + 10y = 20$ 38. $-x - y = 6$ 39. $y = 1.5$
 40. $2.5x - 5y = -15$ 41. $x = -\frac{5}{2}$ 42. $\frac{1}{2}x + 2y = -2$

CHOOSING A METHOD Graph the equation using any method.

43. $6y = 3x + 6$ 44. $-3 + x = 0$ 45. $y + 7 = -2x$
 46. $4y = 16$ 47. $8y = -2x + 20$ 48. $4x = -\frac{1}{2}y - 1$
 49. $-4x = 8y + 12$ 50. $3.5x = 10.5$ 51. $y - 5.5x = 6$
 52. $14 - 3x = 7y$ 53. $2y - 5 = 0$ 54. $5y = 7.5 - 2.5x$

55.  **TAKS REASONING** Write equations of two lines, one with an x -intercept but no y -intercept and one with a y -intercept but no x -intercept.
56.  **TAKS REASONING** Sketch $y = mx$ for several values of m , both positive and negative. Describe the relationship between m and the steepness of the line.
57. **REASONING** Consider the graph of $Ax + By = C$ where $B \neq 0$. What are the slope and y -intercept in terms of A , B , and C ?
58. **CHALLENGE** Prove that the slope of the line $y = mx + b$ is m . (Hint: First find two points on the line by choosing convenient values of x .)

PROBLEM SOLVING**EXAMPLE 3**

on p. 91
for Exs. 59–62

59. **FITNESS** The total cost y (in dollars) of a gym membership after x months is given by $y = 45x + 75$. Graph the equation. What is the total cost of the membership after 9 months?

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60. **CAMPING** Your annual membership fee to a nature society lets you camp at several campgrounds. Your total annual cost y (in dollars) to use the campgrounds is given by $y = 5x + 35$ where x is the number of nights you camp. Graph the equation. What do the slope and y -intercept represent?

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61. **SPORTS** Bowling alleys often charge a fixed fee to rent shoes and then charge for each game you bowl. The function $C(g) = 3g + 1.5$ gives the total cost C (in dollars) to bowl g games. Graph the function. What is the cost to rent shoes? What is the cost per game?

62. **PHONE CARDS** You purchase a 300 minute phone card. The function $M(w) = -30w + 300$ models the number M of minutes that remain on the card after w weeks. Describe how to determine a reasonable domain and range. Graph the function. How many minutes per week do you use the card?