

4-1 Graphing Equations in Slope-Intercept Form

Write an equation of a line in slope-intercept form with the given slope and y-intercept.

41. slope: $-\frac{3}{7}$, y-intercept: 2

42. slope: 1, y-intercept: 4

43. slope: 0, y-intercept: 5

Graph each equation.

44. $y = \frac{3}{4}x - 2$

45. $y = \frac{5}{3}x + 4$

46. $3x + 8y = 32$

47. $5x - 6y = 36$

48. $-4x + \frac{1}{2}y = -1$

49. $3x - \frac{1}{4}y = 2$

50. **TRAVEL** A rental company charges \$75 per hour for a jet ski plus a \$5 fee for a life jacket.

a. Write an equation in slope-intercept form for the total rental cost C for a jet ski and a life jacket for t hours.

b. Graph this equation. Then state the slope and y-intercept.

c. What would the cost be for 2 life jackets and 2 jet skis for 8 hours?

51. **ORGANIZE IDEAS** For Texas residents, the average tuition at Texas A & M is \$177 per credit hour. Fees cost \$273 per year.

a. Write an equation in slope-intercept form for the tuition T for c credit hours.

b. Find the cost for a student who is taking 32 credit hours.

62. **ORGANIZE IDEAS** Draw a graph representing a real-world linear function and write an equation for the graph. Describe what the graph represents.

63. **ORGANIZE IDEAS** Determine whether the equation of a vertical line can be written in slope-intercept form. Explain your reasoning.

64. **ANALYZE RELATIONSHIPS** Summarize the characteristics that the graphs $y = 3x + 4$, $y = 2x + 4$, $y = -x + 4$, and $y = -5x + 4$ have in common.

65. **ANALYZE RELATIONSHIPS** If given an equation in standard form, explain how to determine the rate of change.