ANSWERS FOR 2.2

2.2 Guided Practice

2. horizontal; vertical

4. $\dfrac{1}{10}$; rises   **6.** $-\dfrac{3}{2}$; falls

8. 0; horizontal

10. Line 2   **12.** parallel

14. perpendicular

16. 52 km/h

2.2 Practice and Applications

18. $-\dfrac{1}{3}$ **20.** $-\dfrac{1}{7}$; falls

22. $-\dfrac{7}{5}$; falls

24. 0; horizontal

26. $\dfrac{1}{22}$; rises   **28.** $\dfrac{21}{4}$; rises

30. $-\dfrac{5}{2}$; falls   **32.** b

34. d

36. If a line is horizontal, only the x-values will be different; the y-values will remain the same.

$$\frac{y - y}{1 - 2} = \frac{0}{-1} = 0$$

If a line is vertical, only the y-values will be different; the x-values will remain the same.

$$\frac{1 - 2}{x - x} = \frac{-1}{0}; \text{ undefined}$$

38. Line 2   **40.** Line 1

42. perpendicular

44. neither   **46.** 4; $\dfrac{\text{m}}{\text{sec}}$

48. 0.003

50. Yes; each slanted half of the roof rises 12 feet of its 36 feet of the apartment building's width, which gives it a slope of $\dfrac{12}{36} = \dfrac{1}{3}$, the same as the $\dfrac{4}{12}$ required by the building code.

52. $\dfrac{2°F}{h}$; $65°F$

54. **a.** 18 ft

b. $\approx$ 18.1 ft

c. $\approx$ 30 ft

d. *Sample answer:* The steeper the ramp, the shorter it will be. If regulation requires more run for the amount of rise, the ramp must get longer as it did from answers (b) to (c) above.

56. –1   **58.** 2

2.2 Mixed Review

60. associative property of addition

62. multiplicative inverse property

64. $-2x - 11$

66. $-\dfrac{5}{3} + \dfrac{2}{15}x$

68. $\dfrac{1}{3}$; 1

70. 60; 12