**1.**  $a_{15} = 141$  **3.**  $a_{15} = 50$  **5.**  $a_{31} = 17$  **7.**  $a_{12} = 12\frac{1}{2}$  **9.**  $a_{40} = -109$  **11.**  $a_n = 3n - 2$  **13.**  $a_n = -3n + 6$ 

**43**. log 8

SECTION 12.2

**15.**  $a_n = -2.5n + 9.5$  **17.** 20 **19.** 20 **21.** 13 **23.** 20 **25.** 2500

**33.**  $\frac{187}{2}$  **35.** -180 **37.** It will take 11 weeks.

**27**. -760 **29**. 189

**39.** The object will fall 144 ft during the fifth second.

41. The apprentice will receive \$3600 during the eighth month. The apprentice will receive \$20,400 for the eight months.