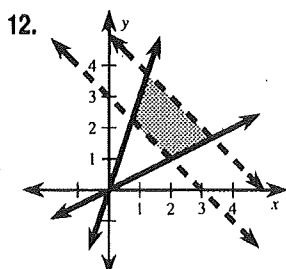
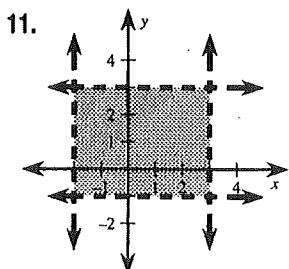
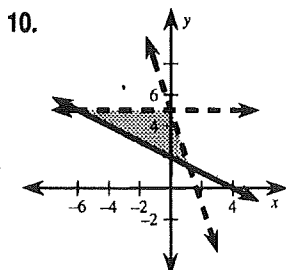
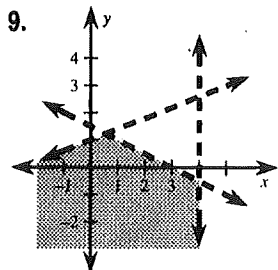
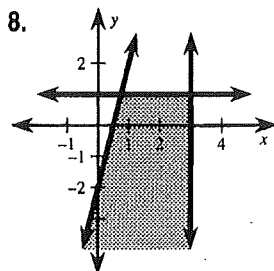
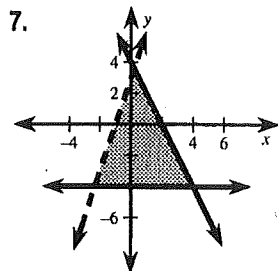


# Lesson 7.6 (continued)



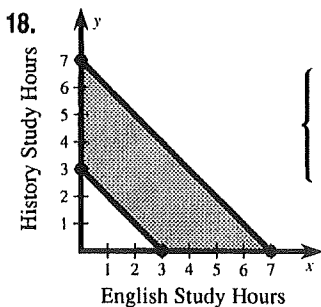
13. (0, 3), (5, -2), (2, 7)

14. (0, -1), (5, 3), (1, 4), (0, 4)

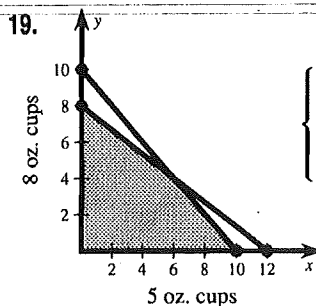
15. (-6, 4), (1, 4), (3, 0), (3, -2)

16. 
$$\begin{cases} x \geq -1 \\ x \leq 3 \\ y \geq -1 \\ y \leq 5 \end{cases}$$

17. 
$$\begin{cases} y \leq -\frac{1}{2}x + 3 \\ y \geq \frac{1}{3}x - \frac{1}{3} \\ x \geq -2 \end{cases}$$



$$\begin{cases} x + y \geq 3 \\ x + y \leq 7 \\ x \geq 0 \\ y \geq 0 \end{cases}$$



$$\begin{cases} 100x + 150y \leq 1200 \\ x + y \leq 10 \\ x \geq 0 \\ y \geq 0 \end{cases}$$

20. 
$$\begin{cases} y \geq -\frac{1}{3}x + 4 \\ y \leq 4 \\ x \leq 6 \end{cases}$$

21. 
$$\begin{cases} y \leq -\frac{1}{3}x + 4 \\ y \geq \frac{1}{3}x \\ x \geq 0 \end{cases}$$

22. 
$$\begin{cases} y \leq \frac{1}{3}x \\ y \geq 0 \\ x \leq 6 \end{cases}$$

## Lesson 7.7

- min = 0, max = 15
- min = 0, max = 48
- min = 10, max = 40
- min = 9, max = 17
- min = 6, max = 17
- min = 0, max = 12
- min = 5, max = 26
- min = 12, max = 26
- min = 3, max = 30
- min = 1, max = 28
- 10 dozen roses and 50 dozen carnations
- 8 lake-front homes, 10 regular homes

## Lesson 8.1

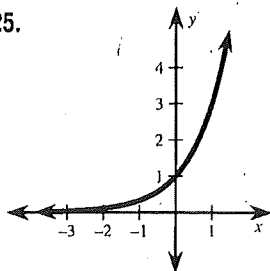
- $3^6$  or 729
- $2^{15}$  or 32,768
- $x^8$
- $y^{16}$
- $8x^3$
- $9x^8$
- $x^{14}$
- $8x^5$
- $x^3y^3z^{12}$
- $a^8b^{10}c^{15}$
- $-x^5y^{10}z^{10}$
- $4x^8y^{13}$
- $x^6, 64$
- $x^3y^6, 8$
- $3x^3y, 24$
- $x^4y^7, 16$
- $-8x^3y^3, -64$
- $72x^2y^2, 288$
- $5x^2y^7, 20$
- $144y^8, 144$
- $-432x^3y^6, -3456$
- $x^6y^{20}, 64$
- $x^4y^5, 16$
- $-2x^{11}y^7, -4096$
- $256 \text{ ft}^3$
- $8\pi \text{ ft}^3$
- $\$108.16$
- 1,048,576, no
- $(5x)^2, 1600 \text{ mi}^2$

## Lesson 8.2

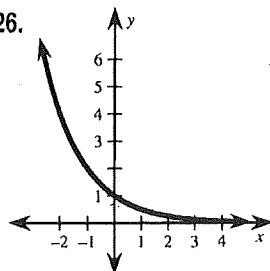
- $\frac{1}{27}$
- $\frac{1}{32}$
- 16
- $\frac{1}{8}$
- 3
- 25
- 1
- $\frac{1}{16}$
- 8
- $\frac{1}{64}$
- $\frac{1}{36}$
- $-\frac{1}{8}$
- $\frac{1}{x^8}$
- $\frac{3}{x^5}$
- $\frac{x^2}{7}$
- $9x^4$
- $\frac{8}{x^7y^8}$
- $\frac{x^4y^3}{6z^5}$
- $3y^3$
- $\frac{1}{16x^2}$
- $\frac{1}{16x^4}$
- $27x^3$
- $\frac{1}{y^2}$
- $\frac{3y^5}{4x^2}$

## Lesson 8.2 (continued)

25.



26.



27. 100, 50, 25, 12.5, 6.25, 3.125, 1.5625

28. 1980:  $\approx 1206$ , 1985: 1200  
1990:  $\approx 1194$ , 2000:  $\approx 1182$

29. 10,240 grams

30. 1960:  $\approx 1869$ , 1970:  $\approx 1933$   
1980: 2000, 1990:  $\approx 2069$

## Lesson 8.3

1. 49    2.  $\frac{1}{36}$     3. 1    4. -1
5. 128    6. 16    7.  $\frac{1}{27}$     8.  $\frac{8}{27}$
9.  $\frac{16}{25}$     10.  $-\frac{1}{32}$     11.  $\frac{3}{11}$     12.  $\frac{4}{9}$
13.  $\frac{x^4}{81}$     14.  $x^5$     15.  $\frac{64}{x^6}$
16.  $\frac{1}{x^3}$     17.  $x^9$     18.  $4x^3y$
19.  $\frac{9y^4}{4x^7}$     20.  $-\frac{4y^3}{x^3}$     21.  $\frac{y^4}{x^2}$
22.  $\frac{x^3}{3}$     23.  $\frac{54y^6}{x^{14}}$     24.  $-\frac{5y^6}{8x^8}$
25.  $\frac{3125}{7776}$     26. 1.030301
27. 2, 2.4, 2.88, 3.456
28. 100,  $\approx 51$ ,  $\approx 26$ ,  $\approx 13$ ,  $\approx 7$ ,  $\approx 4$ ,  $\approx 2$

## Lesson 8.4

1. 2030    2. 34,578    3. 64.3    4. 720,000
5. 5.2    6. 0.0468    7. 0.0000013
8. 0.008497    9. 0.00098    10.  $2.5 \times 10^4$
11.  $3.641 \times 10^1$     12.  $4 \times 10^6$
13.  $5.642 \times 10^5$     14.  $9.32 \times 10^0$
15.  $1.5 \times 10^{-1}$     16.  $8.3 \times 10^{-3}$
17.  $7.18 \times 10^{-7}$     18.  $6.73 \times 10^{-2}$
19.  $6 \times 10^{11}$     20.  $9 \times 10^{-9}$
21.  $6 \times 10^2$     22.  $8 \times 10^{-1}$
23.  $1.2 \times 10^{10}$     24.  $3.5 \times 10^{-3}$
25.  $2.4 \times 10^4$     26.  $3.6 \times 10^{-2}$
27.  $4.2 \times 10^{-1}$     28.  $2.7 \times 10^9$
29.  $3.125 \times 10^{-4}$     30.  $1 \times 10^{12}$
31.  $1.86 \times 10^5$     32.  $1.2719 \times 10^9$
33.  $6.681822 \times 10^{-24}$     34.  $\approx 2.91 \times 10^{-1}$

## Lesson 8.5

1.  $\approx 8424$  people/km<sup>2</sup>    2. \$4000
3.  $1.0375 \times 10^3$  minutes    4.  $\frac{1}{15}$

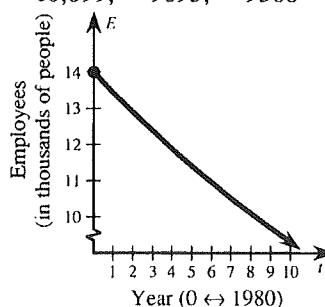
5.  $\approx 4.684 \times 10^3$  sec    6. 65
7.  $3 \times 10^4$  ft<sup>2</sup>,  $\approx 0.37$  dollars/ft<sup>2</sup>
8.  $\approx 3.26 \times 10^{-15}$  cm<sup>3</sup>

## Lesson 8.6

1. \$325.78    2. \$1191.02    3. a
4. a    5.  $P = 100,000(1.015)^t$
6.  $T = 4000(1.08)^t$
7.  $y = 300 + 30t$ ,  $y = 300(1.062)^t$ , yes
8.  $y = 500 + 35t$ ,  $y = 500(1.062)^t$ , no

## Lesson 8.7

1. \$11,250.00, \$1,126.27    2.  $\approx 50$
3. 14,000,  $\approx 13,440$ ,  $\approx 12,902$ ,  $\approx 12,386$ ,  
 $\approx 11,891$ ,  $\approx 11,415$ ,  $\approx 10,959$ ,  $\approx 10,520$ ,  
 $\approx 10,099$ ,  $\approx 9695$ ,  $\approx 9308$



4.  $\approx 7.0\%$     5.  $\approx 5.9$  hr,  $s = 8(0.985)^t$
6.  $S = 600(0.9)^t$ , \$600, \$540, \$486, \$437.40,  
\$393.66, \$354.29, \$318.86, \$286.98
7.  $\approx 327,291$     8.  $\approx \$1.33$  million

## Lesson 9.1

1. 4    2. -8    3.  $\frac{1}{7}$     4. 0.5
5.  $\approx 5.66$     6. -6    7.  $\frac{2}{5}$     8. 12
9.  $\approx -10.39$     10.  $-\frac{6}{11}$     11. -1.3
12.  $\frac{17}{14}$     13. 7    14.  $\approx 3.46$     15. 5
16. Undefined    17.  $\approx 4.12$     18. 9
19.  $\approx 1.89$ ;  $\approx 0.51$     20.  $\approx 2.52$ ;  $\approx -1.02$
21.  $\approx -0.51$ ;  $\approx -2.82$     22.  $\approx 5.10$ ;  $\approx -0.10$
23.  $\approx -6.12$ ;  $\approx -1.88$     24.  $\approx 0.67$ ;  $\approx -1.24$
25. 3.5 cm    26.  $\approx 10.05$  ft    27.  $\approx 65.80$  mi
28.  $\approx 17.09$  ft

## Lesson 9.2

1.  $\pm 7$     2.  $\pm 8$     3.  $\pm 10$     4.  $\pm 4$
5.  $\pm 3$     6.  $\pm 6$     7.  $\pm \frac{2}{5}$     8.  $\pm 1$
9.  $\pm 9$     10.  $\pm 3$     11.  $\pm 10$     12.  $\pm \frac{11}{2}$
13.  $\pm 5.92$     14.  $\pm 3.46$     15.  $\pm 2.24$
16.  $\pm 5.10$     17.  $\pm 4.12$     18.  $\pm 2.65$