Name _____ Date _____ Class _____

LESSON 6-2

Practice B

Solving Systems by Substitution

Solve each system by substitution. Check your answer.

1. $\begin{cases} y = x - 2 \\ y = 4x + 1 \end{cases}$

2. $\begin{cases} y = x - 4 \\ y = -x + 2 \end{cases}$

3. $\begin{cases} y = 3x + 1 \\ y = 5x - 3 \end{cases}$

4. $\begin{cases} 2x - y = 6 \\ x + y = -3 \end{cases}$

5. $\begin{cases} 2x + y = 8 \\ y = x - 7 \end{cases}$

6. $\begin{cases} 2x + 3y = 0 \\ x + 2y = -1 \end{cases}$

7. $\begin{cases} 3x - 2y = 7 \\ x + 3y = -5 \end{cases}$

8. $\begin{cases} -2x + y = 0 \\ 5x + 3y = -11 \end{cases}$

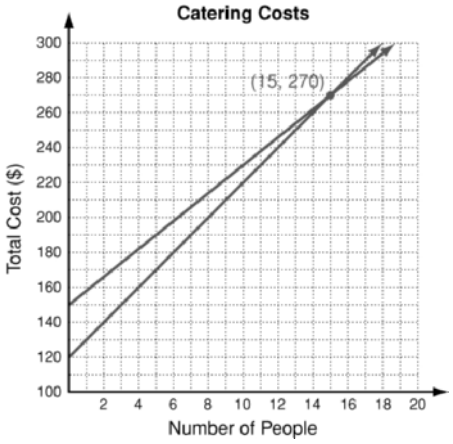
9. $\begin{cases} \frac{1}{2}x + \frac{1}{3}y = 5 \\ \frac{1}{4}x + y = 10 \end{cases}$

Write a system of equations to represent the situation. Then, solve the system by substitution.

10. The length of a rectangle is 3 more than its width. The perimeter of the rectangle is 58 cm. What are the rectangle's dimensions?

11. Carla and Benicio work in a men's clothing store. They earn commission from each suit and each pair of shoes they sell. For selling 3 suits and one pair of shoes, Carla has earned $47 in commission. For selling 7 suits and 2 pairs of shoes, Benicio has earned $107 in commission. How much do the salespeople earn for the sale of a suit? for the sale of a pair of shoes?

Reading Strategies

1. number of people; total cost
2. $y = 10x + 120$; $y = 8x + 150$
3. 

4. (15, 270)
5. For 15 people, the total cost will be $270 with both catering companies.

LESSON 6–2

Practice A

1. $3x$; $3x$; x; $2x$; 2; 2; x; 2; 2; 2; 2; 6; 2; 6
2. $x - 3$; $x - 3$; $4x$; $4x$; 4; 4; x; 7; 7; 7; 7; 4; 7; 4
3. (3, 12)
4. (2, 0)
5. (2, –5)
6. a. $\begin{cases} y = 20x + 45 \\ y = 26x + 30 \end{cases}$

   b. 2.5

   c. $95

Practice B

1. (–1, –3)
2. (3, –1)
3. (2, 7)
4. (1, –4)
5. (5, –2)
6. (3, –2)
7. (1, –2)
8. (–1, –2)
9. (4, 9)
10. $\begin{cases} l = w + 3 \\ 2l = 2w + 58 \end{cases}$; 13 cm by 16 cm
11. $\begin{cases} 3s + 1p = 47 \\ 7s + 2p = 107 \end{cases}$; suit: $13; pair of shoes: $8

Practice C

1. (2, –4)
2. (3, –1)
3. (0, 8)
4. (–2, –1)
5. $\left(\frac{1}{2}, -2\right)$
6. (–6, –2)
7. (0.8, 0.2)
8. (8, –12)
9. (6, –8)
10. 11 and 28
11. 12 quarters
12. $12.00

Review for Mastery

1. (2, 3)
2. (7, 9)
3. (–4, 1)
4. (17, 7)
5. (3, 6)
6. (–1, 7)

Challenge

1. $x = 3$; $y = -1$, $z = 4$
2. $x = -1$; $y = 4$, $z = -3$
3. $x = 2$; $y = 8$, $z = -5$
4. $x = -2$; $y = 13$, $z = 4$

Problem Solving

1. 3 quarters,
   5 dimes
2. 3 months;
   $155
3. 12 turkey burgers,
   9 beef hamburgers
4. used CD $4.50,
   used DVD $6.50
5. B
6. H
7. A
8. H

Reading Strategies

1. $y = 5 - x$ or $y = -x + 5$
2. The first equation is already solved for y.
3. The solution of a system must satisfy both equations.
4. (6, 4)
5. (–3, 5)