1.4 Extra Practice

In Exercises 1–4, solve the system using the elimination method.

- 1. 3x y + z = -12. 4x + 3y 5z = -93x + 2y 5z = -166x + 6y 3z = 63x + 3y + 2z = 63x 3y + 4z = 193. x y z = 54x 4y 4z = 154x 4y 4z = 15x + y + 3z = 53x y 4z = -23y + 6z = 12
- **5.** Describe and correct the error in the first step of solving the system of linear equations.

$$5x + 3y - z = 15$$

$$-x + 2y + 3z = 10$$

$$3x - 4y + 3z = 8$$

$$-15x - 9y - 3z = 45$$

$$3x - 4y + 3z = 8$$

$$-12 - 13y = 53$$

6. Three orders are placed at a food truck. One sandwich, a juice, and a fruit cup cost \$9; two sandwiches, a juice, and two fruit cups cost \$16.50; and three sandwiches, two juices, and a fruit cup cost \$19. How much does each item cost?

In Exercises 7 and 8, solve the system of linear equations using the substitution method.

7.	2x - y = 6	8.	6x + 3y - 9z = 10
	4x - 3y - 2z = 14		-2x - y + 3z = 3
	-x + 2y - 3z = 12		x - 2y - z = 1

- **9.** Your friend claims that she has a bag of 30 coins containing nickels, dimes, and quarters. The total value of the 30 coins is \$3. There are twice as many nickels as there are dimes. Is your friend correct? Explain your reasoning.
- **10.** Find the values of a, b, and c so that the linear system shown has (2, -1, -4) as its only solution. Explain your reasoning.

x + 3y - z = a 2x - 5y + 2z = b-x + 8y - z = c