LESSON 3.6

NAME _____ DATE _____

Practice B

For use with pages 177–184

Decide whether the given ordered triple is a solution of the system.

1. $(0, 0, 3)$
$3x + 4y + z = 3$
$-2x + 7y + 2z = 6$
$-10x + 12y - z = -3$

2. $(-1, -2, 5)$
$2x + y - 5z = -29$
$6x + 4y - z = -19$
$x + y + 2z = 7$

3. $(0, 0, 0)$
$x + y + z = 0$
$2x + 3y - z = 0$
$3x + y - 4z = 1$

4. $(-1, -3, -2)$
$x - 5y + 6z = 2$
$3x - y + 8z = -16$
$4x + 2y - 7y = 4$

5. $(5, 7, 1)$
$x + y + z = 13$
$2x - 7y + 5z = -34$
$3x + y + 4z = 25$

6. $(-4, 8, -9)$
$x + 2y - 3z = 39$
$2x + y - 7z = -63$
$3x + y + z = -13$

Use any algebraic method to solve the system.

7. $x - y + 2z = 4$
$x - 3z = 1$
$2y - z = -15$

8. $x + y - z = 6$
$2y - 3z = 4$
$-y + 2z = -1$

9. $x + 2y - z = 3$
$x - 3y + z = -1$
$-x + y - 3z = 5$

10. $x - 2y - z = 3$
$x + y + 2z = 9$
$2x + 3y + z = 0$

11. $2x + 3y + 2z = 1$
$x + 4y - z = 7$
$3x + y + 3z = -2$

12. $x - 2y + 3z = -7$
$4x + 5y + z = 4$
$-x + y - 2z = 5$

13. $8x + 2y - z = -25$
$3x - 3y + 5z = 10$
$-5x + 6y - 2z = 17$

14. $x + 5y - 2z = -16$
$-x - 7y + 3z = 23$
$3x - 10y - 5z = 5$

15. $3x + 2y - 8z = 4$
$6x + 4y - 16z = 8$
$12x + 8y - 32z = 16$

16. ***Pet Store Supplies*** A pet store receives a shipment of pet foods at the beginning of each month. Over a three month period, the store received 1770 pounds of dog food, 1165 pounds of cat food, and 365 pounds of bird seed. Write and solve a system of equations to find the number of pounds of pet food in each of the three shipments.

Pet food	*1st shipment*	*2nd shipment*	*3rd shipment*
Dog food	60%	50%	50%
Cat food	25%	35%	45%
Bird seed	15%	15%	5%

17. ***Movie Rental Store*** The table below shows the percent of comedies, drama, and action videos available at a video store. Write and solve a system of equations to find out how many comedies, dramas, and action movies are at the store. Assume that the store has a collection of 3405 general videos to be rented, 1070 children's videos to be rented, and 1225 videos for sale.

Store section	*Comedy*	*Drama*	*Action*
General rental	55%	65%	60%
Children's rental	25%	10%	20%
Videos for sale	20%	25%	20%

Chapter 3
Lesson 3.6

Practice B

1. $(0, 0, 3)$ is a solution.

2. $(-1, -2, 5)$ is a solution.

3. $(0, 0, 0)$ is *not* a solution.

4. $(-1, -3, -2)$ is a solution.

5. $(5, 7, 1)$ is *not* a solution.

6. $(-4, 8, -9)$ is *not* a solution.

7. $(-2, -8, -1)$ **8.** $(3, 5, 2)$ **9.** $(1, 0, -2)$

10. $(2, -3, 5)$ **11.** $(1, 1, -2)$ **12.** $(-6, 5, 3)$

13. $(-3, 2, 5)$ **14.** $(0, -2, 3)$

15. infinitely many solutions

16. $0.6x + 0.5y + 0.5z = 1770$

$0.25x + 0.35y + 0.45z = 1165$

$0.15x + 0.15y + 0.05z = 365$

There were 1200 pounds of pet food in the first shipment, 800 pounds of pet food in the second shipment, and 1300 pounds of pet food in the third shipment.

17. $0.55x + 0.65y + 0.60z = 3405$

$0.25x + 0.10y + 0.20z = 1070$

$0.20x + 0.25y + 0.20z = 1225$

There are 2000 comedies, 1700 dramas, and 2000 action movies at the store.