2-2

Practice

Solving Systems of Equations in Three Variables

Solve each system of equations.

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

2. $x + y = 5$
$3x + z = 2$
$4y - z = 8$

3. $3x - 5y + z = 8$
$4y - z = 10$
$7x + y = 4$

4. $2x + 3y + 3z = 2$
$10x - 6y + 3z = 0$
$4x - 3y - 6z = 2$

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

6. $4x + 4y - 2z = 3$
$-6x - 6y + 6z = 5$
$2x - 3y - 4z = 2$

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

8. $2x + 4y - 2z = 9$
$4x - 6y + 2z = -9$
$x - y + 3z = -4$

9. ***Business*** The president of Speedy Airlines has discovered that her competitor, Zip Airlines, has purchased 13 new airplaines from Commuter Aviation for a total of $15.9 million. She knows that Commuter Aviation produces three types of planes and that type A sells for $1.1 million, type B sells for $1.2 million, and type C sells for $1.7 million. The president of Speedy Airlines also managed to find out that Zip Airlines purchased 5 more type A planes than type C planes. How many planes of each type did Zip Airlines purchase?