

Solve the system using substitution or elimination.

1.
$$\begin{aligned} y &= 4x \\ x + y &= 5 \end{aligned}$$

2.
$$\begin{aligned} x &= -4y \\ 3x + 2y &= 20 \end{aligned}$$

3.
$$\begin{aligned} x + y &= 27 \\ x - y &= 5 \end{aligned}$$

4.
$$\begin{aligned} x - 5y &= 10 \\ 2x - 10y &= 20 \end{aligned}$$

5.
$$\begin{aligned} 3x + 2y &= 0 \\ 8x + 7y &= 5 \end{aligned}$$

6.
$$\begin{aligned} 6x + 5y &= 12 \\ 9x + 11y &= 39 \end{aligned}$$

Set up a system of equations for the following problems. (Set up the system even if you can do the problem in your head.) Identify your variables. Solve the system.

7. Two different numbers added together equal 5. The same two numbers subtracted from each other equal 1. Find the two numbers.
8. Joe bought five shirts and three ties at Macy's for \$102. Michael bought eight shirts and three ties for \$147. What is the price of each shirt and each tie?
9. You are taking a group to a play. The cost for 16 adult tickets and 8 child tickets is \$520. One group shows up at the last minute and would like 4 adult tickets and 6 child tickets which ends up costing another \$190. Find the price of each ticket.
10. Suzie saved \$1.06 in pennies and nickels. She has 70 coins in all. How many of the coins are pennies?
11. A geometry test is worth 100 points and contains 38 problems. Each problem is worth either 5 points or 2 points. How many of each value are on the test?