

1. Solve each of the following system of linear equations by elimination.

a) $\begin{cases} 3x + y = 5 \\ 2x - y = 15 \end{cases}$ c) $\begin{cases} 3x + y = 10 \\ 5x - y = -2 \end{cases}$ e) $\begin{cases} -2x + 3y = -11 \\ 5x - 2y = 0 \end{cases}$

b) $\begin{cases} x + 5y = 32 \\ x - 2y = -24 \end{cases}$ d) $\begin{cases} 4x + 5y = 12 \\ -3x + y = -9 \end{cases}$ f) $\begin{cases} 4x - 5y = 30 \\ 7x + 2y = -12 \end{cases}$

2. There is an animal farm where chickens and cows live. All together, there are 53 heads and 174 legs. How many chickens and how many cows are there on the farm?
3. The sum of two numbers is 73, their difference is 29. Find these numbers.
4. We have some \$10 dollar bills and some \$20 dollar bills. How many of each do we have if all together, we have 42 bills and their total value is \$620?
5. We have some coins, all dimes and quarters. How many of each type of coins do we have if all together, we have 83 coins and their total value is \$15.50?

Answers

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a) $x = 4, y = -7$ b) $x = -8, y = 8$ c) $x = 1, y = 7$ d) $x = 3, y = 0$ e)
 $x = -2, y = -5$ f) $x = 0, y = -6$

2. There is an animal farm where chickens and cows live. All together, there are 53 heads and 174 legs. How many chickens and how many cows are there on the farm? 19 chickens and 34 cows

3. The sum of two numbers is 73, their difference is 29. Find these numbers. 22 and 51

4. We have some \$10 dollar bills and some \$20 dollar bills. How many of each do we have if all together, we have 42 bills and their total value is \$620? 22 tens and 20 twenties

5. We have some coins, all dimes and quarters. How many of each type of coins do we have if all together, we have 83 coins and their total value is \$15.50?

35 dimes and 48 quarters