

Part 1: Determine the exact time and distance Bald Biker and Howard will be when tied in the trike race.



What's In My Pocket?



I have 20 coins in my pocket. The coins are quarters and dimes. The total amount of money is \$3.05. What could be in my pocket?

How would you figure this out?

Define our variables:

Find two totals mentioned in the problem:

Using the above totals and variables, write a system of equations that represents the amount of money in your pocket:

Solving the system of linear equations by _____.

Elimination Method:

Solving the system by elimination:

What is our system:

Steps to Solving a Linear System by Elimination

1.

2.

3.

4.

5.

6.

Solve the system of linear equations by elimination. Check your answer and state the type of system.

1)
$$\begin{cases} 3x + 2y = 10 \\ -3x + y = -22 \end{cases}$$

2)
$$\begin{cases} 8x - 6y = 36 \\ -2x + 6y = 0 \end{cases}$$

Type:

Check:

Type:

Check:

$$3) \begin{cases} -2x + y = 3 \\ -3x + y = 2 \end{cases}$$

Type:

Check:

$$4) \begin{cases} -3x + 4y = 12 \\ 2x + y = -8 \end{cases}$$

Type:

Check:

Solving special linear systems by elimination. Check your answer and state the type of system.

$$1) \begin{cases} x + y = 5 \\ -3x - 3y = -15 \end{cases}$$

Type:

Check:

$$2) \begin{cases} -2x + y = 3 \\ -2x + y = 2 \end{cases}$$

Type:

Check:

Solve the real-world situation by using elimination.

Lindsey spent \$16.30 to buy 16 flowers. The bouquet contained daisies, which cost \$1.75 each, and tulips, which cost \$.85 each. How many of each type of flower did Lindsey buy?



- Identify your variables.
- Write the system of equations that can be used to represent this situation.
- Which variable will you eliminate and how?
- How many of each type of flower did Lindsey buy?

Ticket out the Door

When solving a system of linear equations what method is your favorite: graphing, substitution, or elimination? Why?