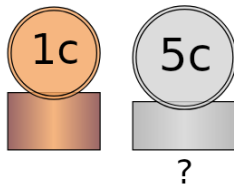


Model comparison problems using systems of linear equations

1

Some coins have a total value of \$0.12. There are 6 more Pennies than Nickels. What equations would help us solve?

\$0.12



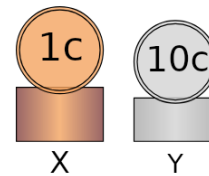
A $p = n + 6$
 $1p + 5n = 12$

B $n = p + 6$
 $5n + 1p = 12$

2

With X Pennies and Y Dimes, some coins are worth \$0.11. With Y Pennies and X Dimes they would be worth \$0.11. What equations would help us solve for X and Y?

\$0.11



A $1X + 5Y = 11$
 $1Y + 5X = 6$

B $1X + 10Y = 11$
 $1Y + 10X = 11$

3

Solve for the variable by adding or subtracting multiples of the second equation to the first

$$\begin{array}{r} 10r + 10y = 60 \\ 7r - 10y = -9 \\ \hline r = ? \end{array}$$

A $r = 17$ B $r = -9$

C $r = 2$ D $r = 3$

E $r = 6$ F $r = 51$

4

Substitute the second variable equation into the first equation to form a single solvable equation

$$\begin{array}{r} p = 4m + 9 \\ p = 2m + 23 \\ \hline m = ? \end{array}$$

A $9m + 9m = 23$ B $4m - 9 = 10m + 23$

C $4m + 9 = 2m + 23$ D $4m + 2 = m$

E $9m - 9m = 23$ F $4m + 9 = 2m + 10$

5

Substitute the second equation into the first equation to form a single solvable equation

$$\begin{array}{r} 7m + 3b = 47 \\ b = 3m + 5 \\ \hline m = ? \end{array}$$

A $9m + 3m + 0 = 47$ B $7m + 9m + 15 = 47$

C $3m + 7 = 3m + 5$ D $9m - 3m - 0 = 47$

E $7m + 3m + 1 = 9$ F $7m + 15m = 47$

6

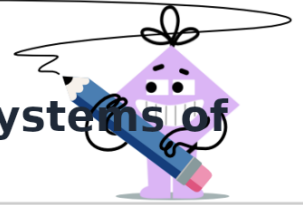
Solve for the variable by substituting the second equation into the first

$$\begin{array}{r} p = 9y - 8 \\ p = 7y + 6 \\ \hline y = ? \end{array}$$

A $y = 5$ B $y = 10$

C $y = 9$ D $y = 7$

E $y = 6$ F $y = 8$



Model comparison problems using systems of linear equations

7

Solve for the variable by substituting the second equation into the first

$$61y - 10c = 6$$

$$c = 5y + 6$$

$$y = ?$$

A

$$y = 50$$

B

$$y = 60$$

C

$$y = 4$$

D

$$y = 5$$

E

$$y = 9$$

F

$$y = 6$$

8

Which equations represent what these meals cost

$$3 \text{ fries} + 2 \text{ donuts} = 7$$

$$6 \text{ fries} + 2 \text{ donuts} = 10$$

$$1 \text{ donut} = ?$$

A

$$4d = 7$$

$$4f + 2d = 10$$

$$5d = ?$$

B

$$3f + 2d = 7$$

$$6f + 2d = 10$$

$$d = ?$$

C

$$2d = 7$$

$$3f + 2d = 10$$

$$4d = ?$$

D

$$2d = 7$$

$$3f + 2d = 10$$

$$d = ?$$

9

Which equations represent what these meals cost

$$4(1 \text{ chicken} + 4 \text{ burgers}) = 84$$

$$4 \text{ chicken} + 1 \text{ burger} = 24$$

$$1 \text{ chicken} + 1 \text{ burger} = ?$$

A

$$4(4h) = 84$$

$$4c = 24$$

$$2c + 2h = ?$$

B

$$4(h) = 84$$

$$5c = 24$$

$$2c + 2h = ?$$

C

$$4(4h) = 84$$

$$4c = 24$$

$$c + 2h = ?$$

D

$$4(c + 4h) = 84$$

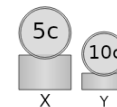
$$4c + h = 24$$

$$c + h = ?$$

10

With X Nickels and Y Dimes, some coins are worth \$0.50. With Y Nickels and X Dimes they would be worth \$0.55. What is X + Y?

\$0.50



A 2

B 7

C 14