

DOK 1

Solve the system of equations below.

$$y = 5x - 2$$

$$-3x + 6y = -12$$

- A (-2, 0)
- B (0, -2)
- C No solution
- D Infinitely many solutions

-

Which ordered pair represents the solution to the system of equations shown below?

$$2x - 3y = 3$$

$$4x - 2y = 10$$

- A (0, -1)
- B (0, -5)
- C (2, 1)
- D (3, 1)

DOK 2

John bought 8 hot dogs and 5 sodas for \$25.50. Alicia bought 4 hot dogs and 3 sodas for \$13.50. How much would 1 hot dog and 1 soda cost?

- A \$4.50
- B \$4.25
- C \$4.00
- D 43.75

Two cars leave Charlotte at the same time. One car is moving east and the other west. After 4 hours, the cars are 456 miles apart. One car is traveling 10 miles per hour faster than the other. What is the speed of the slower moving vehicle?

- A 47 miles per hour
- B 52 miles per hour
- C 62 miles per hour
- D 67 miles per hour

Which systems of equations have the same solutions?

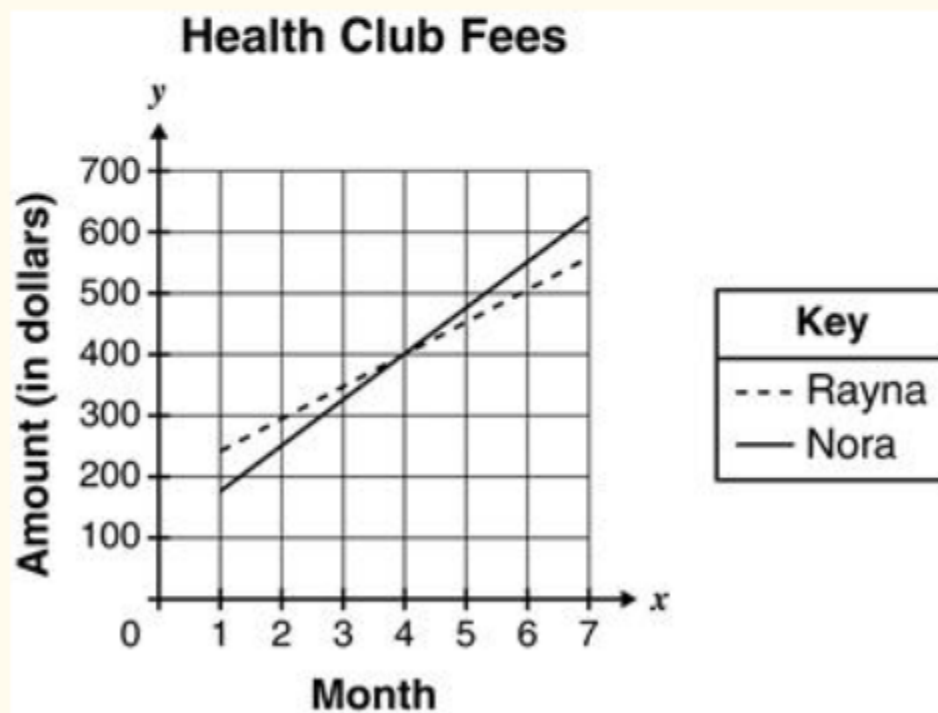
$$L \begin{cases} 3x + y = 8 \\ x - 4y = -6 \end{cases} \quad M \begin{cases} 4x - 3y = 2 \\ 5x - 4y = -30 \end{cases} \quad N \begin{cases} 4x - 3y = 2 \\ 2x - 8y = -12 \end{cases}$$

- A *L and M*
- B *L and N*
- C *M and N*
- D *L, M, and N*

Rayna paid a \$200 fee to join a health club and then a \$50 fee per month to use the club. The total amount of money ( $t$ ) paid can be represented by the equation  $t = 200 + 50m$ , where  $m$  represents the number of months of club use.

Nora paid a \$100 fee to join another health club and then a \$75 fee per month to use the club, which can be represented by the equation  $t = 100 + 75m$ .

The graph below shows the fees paid by Rayna and Nora.



In what month will both girls have paid an equal amount of money to their health clubs?

- A Month 1
- B Month 3
- C Month 4
- D Month 5

DOK 3

Solve the system of equations below.

$$\begin{aligned}y &= x + z + 5 \\z &= -3y - 3 \\2x - y &= -4\end{aligned}$$

Solve the system of equations below.

$$\begin{aligned}y &= x + z + 5 \\z &= -3y - 3 \\2x - y &= -4\end{aligned}$$

Solve the system of equations below.

$$\begin{cases} x + 2y - z = 4 \\ 2x + y + z = -2 \\ x + 2y + z = 2 \end{cases}$$

Solve the system of equations below.

$$\begin{aligned}5x - 4y + 2z &= 21 \\-x - 5y + 6z &= -24 \\-x - 4y + 5z &= -21\end{aligned}$$

DOK 4

Write a system of equations with the solution  $(2, 1, 0)$ .

The sum of the digits of a three-digit number is 12. The tens digit is 2 less than the hundreds digit, and the units digit is 4 less than the sum of the other two digits. What is the number?

Monica decided to divide a total of \$42,000 into three investments: a savings account paying 5% interest, a time deposit paying 7%, and a bond paying 9%. Her total annual interest from the three investments was \$2600, and the interest from the savings account was \$200 less than the total interest from the other two investments. How much did she invest at each rate?

A cashier has 25 coins consisting of nickels, dimes, and quarters with a value of \$4.90. If the number of dimes is 1 less than twice the number of nickels, how many of each type of coin does she have?