

Learning Target: I can solve systems of equations and interpret viable solutions.

Bell Work: ~~Elimination~~

If (x, y) is the solution to the system of equations above, what is the value of x ?

$$\begin{aligned} 2(-3x + 4y) &= 20 \\ + 6x + 3y &= 15 \\ \hline -6x + 8y &= 40 \\ + 6x + 3y &= 15 \\ \hline 11y &= 55 \\ y &= 5 \end{aligned}$$

$$6x + 3(5) = 15$$

$$6x + 15 = 15$$

$$6x = -15$$

$$x = -\frac{15}{6} = -\frac{5}{2}$$

$$\frac{b}{a} = \frac{D}{D}$$

$$x = 0$$

$$3x + 4y = -23$$

$$2y - x = -19$$

What is the solution (x, y) to the system of equations above?

- A) $(-5, -2)$
- B) $(3, -8)$**
- C) $(4, -6)$
- D) $(9, -6)$

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Bell Work: $y = mx + b$

In the system of equations above, k is a constant and x and y are variables. For what value of k will the system of equations have no solution?

$$\begin{aligned} kx - 3y &= 4 \\ -kx - 5y &= 7 \end{aligned}$$

$$\begin{aligned} kx - 3y &= 4 \\ -kx - 5y &= 7 \\ \hline -8y &= 11 \\ y &= -\frac{11}{8} \end{aligned}$$

$$y = \frac{1}{5}x - \frac{7}{5}$$

$$y = \frac{1}{5}x - \frac{7}{5}$$

$$5y = x - 7$$

$$x = 5y + 7$$

$$\frac{12}{5}$$

$$\frac{16}{7}$$

$$-\frac{16}{7}$$

$$-\frac{12}{5}$$

The sum of three numbers is 855. One of the numbers, x , is 50% more than the sum of the other two numbers. What is the value of x ?

- A) $570 \div 15 = 380 = 950$
- B) $813 \div 15 = 342 = 855$**
- ~~C) 214~~
- ~~D) 155~~

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Bell Work:

In the equations above, b and c are constants.

If b is c minus $\frac{1}{2}$, which of the following is true?

$$\begin{aligned} 3x + b &= 5x - 7 \\ 3y + c &= 5y - 7 \end{aligned}$$

$$b = c - \frac{1}{2}$$

$$3x + c - \frac{1}{2} = 5x - 7$$

$$3x - 5x + c = -7 + \frac{1}{2}$$

$$-2x + c = -\frac{13}{2}$$

$$c = 2x - \frac{13}{2}$$

$$2x - 7 = 2x - 6.5$$

$$+6.5$$

$$-0.5 = 0$$

$$x = 4$$

$$x = y$$

$$x = y \text{ plus } \frac{1}{2}$$

$$x \text{ is } y \text{ minus } \frac{1}{2}$$

$$x \text{ is } y \text{ minus } 1$$

Mr. Kohl has a beaker containing n milliliters of solution to distribute to the students in his chemistry class. If he gives each student 3 milliliters of solution, he will have 5 milliliters left over. In order to give each student 4 milliliters of solution, he will need an additional 21 milliliters. How many students are in the class?

- A) 16
 - B) 21
 - C) 23
 - D) 26
- $$n = 3x + 5$$

$$n = 4x - 21$$