

Part A: Systems of Equations ~ Solve

$$\begin{aligned} 3x - 2y &= 7 \\ 2x - 5y &= 12 \end{aligned}$$

$$\begin{aligned} 3x + y &= 12 \\ 2x + 5y &= 21 \end{aligned}$$

$$\begin{aligned} x &= 3y + 8 \\ x &= -7y - 12 \end{aligned}$$

$$\left(\frac{19}{3}, 8\right)$$

$$(3, 3)$$

$$(2, -2)$$

Two people share a lottery prize worth \$1200. One person received \$800 less than 3 times what the other person received. How much did each person receive?

$$\text{\$500 \& \$700}$$

The sum of Jano's age and David's age is 34 years. Five years ago the sum of twice Jano's age and three times David's age was 61 years. What are their present ages?

$$\text{Jano is 16 and David is 18}$$

At the Sportsarama event, 500 people attended, some paying \$3.50 and some \$2.75 for their tickets. The total receipts collected from the event was \$1510. This is \$609 more than last year's event. How many people paid \$3.50 for their tickets.

$$\begin{aligned} &320 \text{ people at } \$2.75 \\ &180 \text{ people at } \$3.50 \end{aligned}$$

Write each of the following in the slope/intercept form of the equation

$$(y = mx + b)$$

$$4x - 2y = 30$$

$$x = 3y + 6$$

$$x + y = -4$$

$$\begin{aligned} y &= 2x - 15 & y &= -x - 4 & y &= \frac{1}{3}x - 2 \end{aligned}$$

$$\frac{(x + y)}{2} = 3$$

$$6(x - 1) = y + 3$$

$$6x - 3y = 12$$

$$\begin{aligned} y &= -x + 6 & y &= 6x - 9 & y &= 2x - \end{aligned}$$

Find the y intercept for each of the following

$$2x + y = 3$$

$$y - 2x = 4$$

$$2x - 3y = 6$$

$$\begin{aligned} x &= \frac{3}{2}, y = 3 & x &= -2; y = 4 & x &= 3; y = -2 \end{aligned}$$

$$x - 4y + 8 = 0$$

$$4x - y - 8 = 0$$

$$2x - y = 8$$

$$\begin{aligned} x &= -8; y = 2 & x &= 2; y = -8 & x &= 4, y = -8 \end{aligned}$$