Solving a Linear Equation

If:

$$3 - \frac{2}{3}x = 7$$

...then x =?

$-3 \quad -3$

$\left(-\frac{3}{2}\right)\left(-\frac{2}{3}x\right) = (4)\left(-\frac{3}{2}\right)$

$x = \frac{-12}{2} = -6$

solve for x

$6 - \frac{2}{5}x = 10$

$-6 \quad -6$

$\left(-\frac{5}{2}\right)\left(-\frac{2}{5}x\right) = (4)\left(\frac{-5}{2}\right)$

$x = \frac{-20}{2} = -10$

Intercepts of a Line

What is the product of the x-intercept and y-intercept of the following equation?

$$6x - 8y = 24$$

when $y=0$

$6x-8(0)=24$

$6x=24$

$x=4$

x-int: 4

$x=0$

$6(0)-8y=24$

$-8y=24$

$y=-3$

y-int $=-3$

prod: $4(-3)$

$=-12$

prod. $4(-3)$

$=-12$

What is the sum of x-intercept and y-intercept of

5x - 7y =70?

$7y=70$

$y=-10$

$5x=70$

$x=14$

sum: 4

Relating Variables: b in Terms of c, d, and x

If $x = \frac{d-b}{c}$, where $c \neq 0$, which of the following represents b in terms of c, d, and x?

$b = -cx + d$

$cx = d - b$

$-d \quad -d$

$cx - d = -b$

$-1 \quad -1$

Let $x = \frac{a+2b}{5}$

$\cdot 5 \qquad \cdot 5$

Solve for b. $x5 = a + 2b$

$-a \quad -a$

$x5 - a = 2b$

$\frac{x5-a}{2} = \frac{2b}{2}$

$\frac{x5-a}{2} = b$

Fahrenheit to Celsius - Equation

Mode

The formula used to convert a temperature from degrees Fahrenheit (F) to degrees Celsius (C) is:

$$C = \frac{5}{9}(F - 32)$$

Which of the following formulas, then, would be used to convert a temperature from $167^\circ C$ to degrees Fahrenheit?

$332.6 = F$

True-False Test

Moderate

Ms. Boolean took a 186 question true/false test. If she answered all 186 questions and answered 86 questions more with "true" rather than with "false", how many questions did Ms. Boolean answer "true"?

Solving a 1-Variable Equation

Which of the following values of p makes the following equation true?

$$\frac{3p-2}{p+4} = -3$$

Distance, Rate, and Time: Running Speed

Moderate

A ball sits on the soccer field at about 8 meters east and 6 meters north of Christie. Coach Riese wants Christie to run straight to the ball and kick it within 20 seconds. Disregarding the time taken in stopping and kicking the ball, how fast must Christie run to accomplish this task?