

March.31st, 2016

Unit 4 Day 3

4-2 Using Division in Equations

$$\begin{aligned} 1) \quad & -2(x+1) = -3x+8 \\ & -2x-2 = -3x+8 \\ & +3x \quad +3x \\ & x-2 = 8 \\ & +2 \quad +2 \\ & \quad \quad \quad x = 10 \end{aligned}$$

$$\begin{aligned} 2) \quad & 8x-7 = x+5 \\ & -x \quad -x \\ & 7x-7 = 5 \\ & +7 \quad +7 \\ & 7x = 12 \end{aligned}$$

↑
Hmm. Want x , have $7x$.
Divide by 7!

$$\frac{7x}{7} = \frac{12}{7}$$

$$x = \frac{12}{7}$$

$$\begin{aligned} 3) \quad & -4x+3 = 7x-19 \\ & -7x \quad -7x \\ & -11x+3 = -19 \\ & -3 \quad -3 \\ & -11x = -22 \\ & -11 \quad -11 \\ & \quad \quad \quad x = 2 \end{aligned}$$

$$\begin{aligned} & -4x+3 = 7x-19 \\ & +4x \quad +4x \\ & 3 = 11x-19 \\ & +19 \quad +19 \\ & 22 = 11x \\ & 11 \quad 11 \\ & \quad \quad \quad x = 2 \end{aligned}$$

$$\begin{aligned} 4) \quad & 3x - 2(4x+3) = 5 - 3(x-4) \\ & 3x - 8x - 6 = 5 - 3x + 12 \\ & -5x - 6 = -3x + 17 \\ & +3x \quad +3x \\ & -2x - 6 = 17 \\ & +6 \quad +6 \\ & -2x = 23 \\ & -2 \quad -2 \end{aligned}$$

$$x = -\frac{23}{2}$$

5) 11 less than 4 times a # is 49. Find the #.

Let x be the #.

$$4x - 11 = 49$$

$$+11 \quad +11$$

$$\underline{4x = 60}$$

$$\underline{4 \quad 4}$$

$$x = 15$$

6) The sum of 3 consecutive integers is 78. Find the middle integer.

Let x be 1st #.

$$x + x + 1 + x + 2 = 78$$

$$3x + 3 = 78$$

$$-3 \quad -3$$

$$\underline{3x = 75}$$

$$\underline{3 \quad 3}$$

$$x = 25$$

Middle # is 26!

Practice 4-3