

BE-Algebra I | Tuesday 9-15-09

Solve:

① $2x + 6x + 3 = 9$

⚡ TIP: COMBINE LIKE TERMS FIRST.

As long as the like terms ARE ON THE SAME side, you DO NOT have to worry about the GRE.

② $4(3x + 6) = 8$

⚡ TIP: USE DP FIRST

AS LONG AS you are ONLY REARRANGING terms, such as getting terms out of parentheses first, you DO NOT have to worry about the GRE.

• Take out homework: Pg 146 # 22-26, 31-33, 37-39.

• Do you know about Alabonin's Homework Help (live tutors) ONLINE?

integers $\{\dots -3, -2, -1, 0, 1, 2, 3, \dots\}$

NOTE: NO DECIMALS, NO FRACTIONS.

Consecutive in a row, NO GAPS

ⓔ Find 3 consecutive integers whose sum is -42 .

ex) $1, 2, 3$ or $12, 13, 14$

Let N = the first integer

Then $N+1$ = the next (second)

$N+2$ = the next (third)

$$N + (N+1) + (N+2) = -42$$

$$\begin{array}{r} 3N + 3 = -42 \\ -3 \quad -3 \end{array}$$

$$\frac{3N}{3} = \frac{-45}{3}$$

$$N = -15 \quad \therefore \boxed{-15, -14, -13 = -42} \checkmark$$

CK

$$\begin{array}{r} 15 \\ 14 \\ 13 \\ \hline 42 \end{array} \checkmark$$

EX 6

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Find 3 consecutive EVEN integers
whose sum is -42 .

Let $N = \text{first}$

$N+2 = \text{second}$

$N+4 = \text{third}$

$$N + (N+2) + (N+4) = -42$$

$$N + N + 2 + N + 4 = -42$$

$$3N + 6 = -42$$

$$\begin{array}{r} -6 \end{array}$$

$$\frac{3N}{3} = \frac{-48}{3}$$

$$N = -16 \quad \therefore [-16 + (-14) + (-12) = -42]$$

CK $\left\{ \begin{array}{r} 16 \\ 14 \\ 12 \\ \hline 42 \end{array} \right\} \checkmark$

Let $N = \text{middle}$

$N-2 = \text{first}$

$N+2 = \text{second}$

$$3N = -42$$

$$N = -14 \quad \therefore [-16 + (-14) + (-12) = -42]$$

Ⓔ Find 3 consecutive even integers whose sum is -41

$$N = \text{first} \quad N+2 = \text{second} \quad N+4 = \text{third}$$

$$\begin{array}{r} 3N+6 = -41 \\ -6 \quad -6 \end{array}$$

$$\frac{3N}{3} = \frac{-47}{3}$$

$$N = \frac{-47}{3} \quad \text{NOT AN INTEGER, } \boxed{\text{NO SOLUTION}}$$

Ⓔ Find 3 consecutive odd integers whose sum is 51

$$N = \text{first} \quad N+2 = \text{second} \quad N+4 = \text{third}$$

$$\begin{array}{r} 3N+6 = 51 \\ -6 \quad -6 \end{array}$$

$$\frac{3N}{3} = \frac{45}{3}$$

$$N = 15 \quad \therefore \boxed{15 + 17 + 19 = 51}$$

CK

$$\left\{ \begin{array}{r} 15 \\ 17 \\ 19 \\ \hline 51 \end{array} \right\} \checkmark$$

Writing Equations from "words":

⇒ Find the Equals sign

⇒ Write left side and right side

(Ex) #42 Pg 146 Write an equation and solve:

Six less than two thirds of a number is negative ten.

$$\underbrace{\hspace{10em}}_{\uparrow}$$

$$\frac{2}{3}N - 6$$

$$\begin{array}{c} \uparrow \\ = \\ \uparrow \end{array}$$

$$-10$$

$$\begin{array}{r} \frac{2}{3}N - 6 = -10 \\ +6 \quad +6 \end{array}$$

*
Look

$$\frac{2}{3}N = -4$$

*
÷ by $\frac{2}{3}$ or better ⇒ • by $\frac{3}{2}$

$$\frac{3}{2} \cdot \frac{2}{3}N = -4 \cdot \frac{3}{2}$$

$$N = -\frac{12}{2}$$

$$\boxed{N = -6}$$

$$\text{CK } \frac{2}{3}(-6) - 6 \stackrel{?}{=} -10$$

$$-4 - 6 = -10 \checkmark$$

Homework: Pg 146 # 43 to 46