Set up and Solve Consecutive Integer Problems

Set up and solve consecutive integer problems: Write two expressions that represent the two numbers, one expression will always be *x*. Use the operation provided for the expressions to set equal to the provided number. Solve for *x* and then plug that in to determine the other integer(s).

Consecutive integers have a distance of 1 in between

Consecutive odd/even integers have a distance of 2 in between

Example 1: Find two consecutive integers whose **sum** is 41

Let x = the 1st integer

Let $x + 1$ = the 2nd integer

$(x) + (x + 1) = 41$

$2x + 1 = 41$

$-1 \quad -1$

$2x = 40$

$\frac{2x}{2} = \frac{40}{2}$

$x = 20$

Since $x = 20$, then $x + 1 = 21$

The two consecutive integers whose sum is 41 are **20 & 21**

Example 2: Find two consecutive even integers whose **sum** is 46

Let x = the 1st integer

Let $x + 2$ = the 2nd integer

$(x) + (x + 2) = 46$

$2x + 2 = 46$

$-2 \quad -2$

$2x = 44$

$\frac{2x}{2} = \frac{44}{2}$

$x = 22$

Since $x = 22$, then $x + 2 = 24$

The two consecutive even integers whose sum is 46 are **22 & 24**

Try These:

1. Find two consecutive integers whose sum is 47

2. Find two consecutive integers whose sum is 81

3. Find two consecutive integers whose sum is 55

4. Find two consecutive integers whose sum is 49

5. Find two consecutive even integers whose sum is 82

6. Find two consecutive even integers whose sum is 22

7. Find two consecutive even integers whose sum is 106

8. Find two consecutive odd integers whose sum is 104

9. Find two consecutive odd integers whose sum is 52

10. Find two consecutive odd integers whose sum is 128