

Number Problems

There is no more common or more useless type of word problem than the standard number problem. It is important to learn how to solve them for no other reason than to learn to manipulate the algebra and put the words into algebra.

Ex.

Find two consecutive integers whose sum is 99

Let the smaller number = x

The next number is $x + 1$ (consecutive integers are 1 unit apart)

Sum implies addition

$$x + (x + 1) = 99$$

$$2x + 1 = 99$$

$$2x = 98$$

$$x = 49$$

$$x + 1 = 50$$

Ex.

Find the number such that 3 times the number + $\frac{1}{2}$ of the number is

14

Let x = the number

$$3x + \frac{1}{2}x = 14$$

$$3.5x = 14$$

$$x = 4$$