

Notes on Solving Percent Word Problems

$$\frac{\text{IS}}{\text{OF}} = \frac{\text{X}}{100}$$

1. The "Of" number comes *after* the word "of".
2. The "Is" number is around the word "is".
3. What percent means $\frac{\text{X}}{100}$

4. 75% means $\frac{75}{100}$

Example 15 is what percent of 75?

$$\frac{\text{IS}}{\text{OF}} = \frac{\text{X}}{100}$$

$$\frac{15}{75} = \frac{\text{X}}{100}$$

$$75\text{X} = 15 \cdot 100$$

$$\frac{75\text{X}}{75} = \frac{1500}{75}$$

$$\text{X} = 20\%$$

Name _____
Period _____

$$\frac{\text{IS}}{\text{OF}} = \frac{X}{100}$$

Most % problems can be solved by straightforward multiplication. See example.

Find 20% of 18

$$.20 \times 18$$

$$\text{or } .2 \times 18 = 3.6$$

Other % problems can be solved by setting up a proportion and using the "Is over Of" above formula.

Solve. What percent of 80 is 15?

The is # usually comes after the word "is". Ex. What percent of 80 is 15? Is # = 15.

The of # usually comes after the word "of", Ex. What percent of 80 is 15? Of # = 80

Since you don't know the percent (It says "What percent" that equals the x)

PERCENT ALWAYS MEANS OUT OF A HUNDRED. (Century = 100)

(Per means out of)

Now to set of the proportion.

$$\frac{\text{IS}}{\text{OF}} = \frac{X}{100}$$

$$\frac{15}{80} = \frac{X}{100}$$

$$\frac{80x}{80} = \frac{1500}{80}$$

$$x = \frac{150}{8} \quad x = \underline{\underline{18.75\%}}$$