

**@ Simple Lesson for Proportions: Begin Lessons with a few Inquiry Questions! @**

A **Ratio** is the **comparison** of two numbers **and** can be written as: ( 2 to 3 ) **or** ( 2 : 3 ) **or** ( 2 / 3 )!

A **Proportion** is a Mathematical statement of ( 2 ) equal ratios! Examples of proportions are given below!

The **Law of Proportions** is a Mathematical Principle or Rule which governs Proportions:

The **Product** of (Extremes) **Outside** Numbers **equals** The **Product** of (Means) **Inside** Numbers!

$$\begin{array}{c} \text{---} \\ | \quad | \\ 2 \text{ to } 3 = 6 \text{ to } 9 \\ \text{---} \\ | \quad | \end{array}$$

$$\begin{array}{c} \text{---} \\ | \quad | \\ 3 : 4 = 9 : 12 \\ \text{---} \\ | \quad | \end{array}$$

$$\begin{array}{c} \text{---} \\ | \quad | \\ 4 / 5 = 8 / 10 \\ \text{---} \\ | \quad | \end{array}$$

**Find the Missing Number in the provided Proportions by using the Law of Proportions!**

$$2 \text{ to } 3 = W \text{ to } 6$$

$$3 : 4 = 6 : X$$

$$Y : 6 = 5 : 10$$

$$4 \text{ to } Z = 8 \text{ to } 12$$

**@ Simple Lesson for Percentages: Begin Lessons with a few Inquiry Questions! @**

A **Percent** is a special ratio of a Number and 100! **25%** = 25 to 100 **or** 25:100 **or** 25/100

Percentage statements are easily changed to Proportions: **75% of 4 is 3** => **75 to 100 = 3 to 4**

Change Percent to a Ratio **then** change the remaining ( 2 ) numbers to the **Second Ratio**:

( **Is** ) Number = **Inside** Number **and** ( **Of** ) Number = **Outside** Number.

**Find the Missing Number in after changing the provided Percent Statement into a Proportion!**

$$25\% \text{ of } 8 \text{ is } (Y) \quad \underline{\quad} : \underline{\quad} = \underline{\quad} : \underline{\quad}$$

$$(X)\% \text{ of } 6 \text{ is } 3 \quad \underline{\quad} : \underline{\quad} = \underline{\quad} : \underline{\quad}$$

$$75\% \text{ of } (W) \text{ is } 9 \quad \underline{\quad} : \underline{\quad} = \underline{\quad} : \underline{\quad}$$

$$(Z)\% \text{ of } 20 \text{ is } 30 \quad \underline{\quad} : \underline{\quad} = \underline{\quad} : \underline{\quad}$$