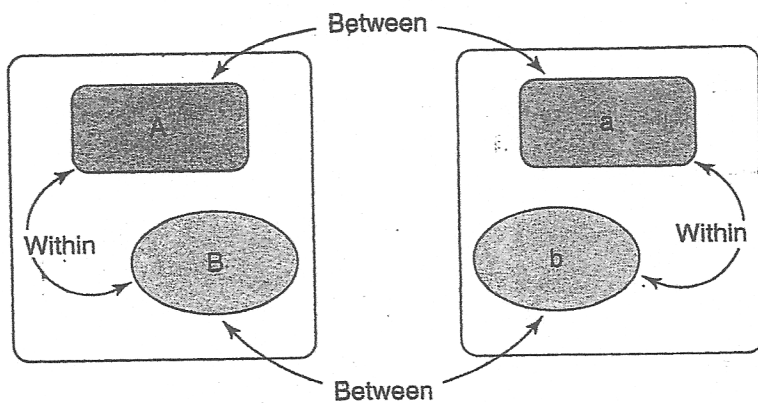


Name _____ Period _____

PROPORTIONS

A proportion is _____
_____.

Given a proportional situation, the two _____ and the two _____ will be the same.



Within:

Between:

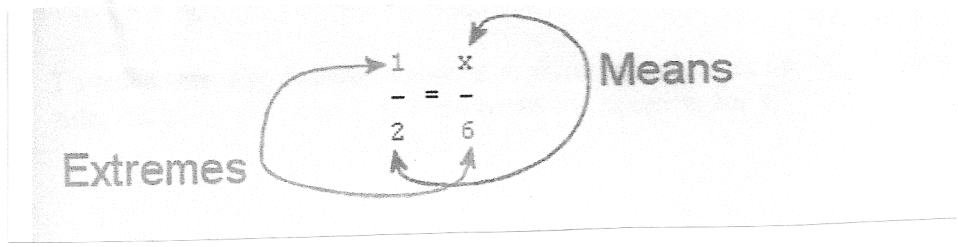
Proportions can be shown in _____ ex. _____

or in _____ ex. _____

There are _____ parts of the _____, the _____

and the _____, based on their arrangement in the proportion. The extremes are the very first number, and the very last number. Notice they are at the extreme

beginning and the extreme end. The means are the second and third numbers. They are in the middle, just like an average.



The _____ of the _____ is equal to the _____ of the _____.

This property is extremely useful when one of the _____ or one of the _____ is UNKNOWN.

Example:

$$\frac{1}{2} = \frac{x}{6} \quad \text{to solve: } 2 \cdot x = 1 \cdot 6 \quad 2x = 6$$

$$x = 3$$

There are 2 ways to tell if ratios are proportional:

1) Compare the ratios in simplest form. _____ and _____

The simplest forms are _____ which means the _____ are _____.

2) If the cross products are _____, then the _____ are _____.

$$\text{_____ and _____} \quad 6 \cdot 12 = \quad 8 \cdot 9 =$$

Since the _____ are _____, the ratios are _____.

If $\frac{A}{B} = \frac{C}{D}$ then, $A \cdot D = B \cdot C$

Practice: Which ratios are proportional?

1) $\frac{4}{10}$ and $\frac{6}{15}$

2) $\frac{3}{7}$ and $\frac{10}{21}$

3) $\frac{6}{9}$ and $\frac{9}{15}$

4) $\frac{5}{10}$ and $\frac{7}{14}$

5) $\frac{4a}{3b} = \frac{12a}{9b}$

6) $\frac{ac}{ef} = \frac{ab}{be}$

7) $\frac{3x}{7y} = \frac{12x}{26y}$

8) $\frac{2}{c} = \frac{4c}{2c^2}$