Solving proportional equations

Ratio	Proportions
• A ratio uses _____ to compare two quantities. • There are THREE ways to write the ratio of two quantities a and b, when b≠0: (1) a ___ b (2) a ___ b (3) $\frac{a}{b}$. • Ratios are read "the ratio of a to b" no matter which way it is written. • Ratios should always be written as _____ in simplest form.	A proportion is an equation that states two _____ are equivalent: $\frac{a}{b} = \frac{c}{d}, where\ b \neq 0\ and\ d \neq 0$

* Solving proportional equations using **cross product**.

   • A cross product is the _____ of the _____ of one ratio

      and _____ of the other ration.

   • The **cross product** of proportions are _____.

Examples of solving proportional equations.

(1) Solve $\frac{8}{x} = \frac{6}{15}$.

(2) Solve $\frac{4}{x} = \frac{8}{x-3}$

DO NOW!

Use Cross Product property to solve for x.

(1) $\dfrac{10}{8} = \dfrac{x}{10}$

solution:

(2) $\dfrac{7}{5} = \dfrac{x}{3}$

solution:

(3) $\dfrac{7}{x} = \dfrac{8}{7}$

solution:

(4) $\dfrac{4}{3} = \dfrac{8}{x}$

solution:

(5) $\dfrac{7}{x+5} = \dfrac{10}{5}$

solution:

(6) $\dfrac{6}{x-1} = \dfrac{9}{7}$

solution:

(7) $\dfrac{5}{6} = \dfrac{7x+9}{9}$

solution:

(8) $\dfrac{7}{9} = \dfrac{x}{x-10}$

solution:

(9) $\dfrac{9}{x-7} = \dfrac{6}{x}$

solution:

(10) $\dfrac{x}{5} = \dfrac{x-6}{4}$

solution: