Proportions

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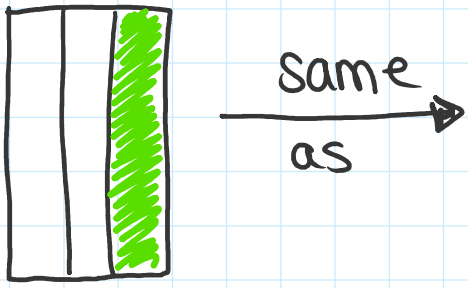
Proportions are just equivalent fractions



same as

$\frac{1}{3} \overset{\times 2}{=} \frac{2}{6}$

lowest terms

equivalent fraction

ex: Create an equivalent fraction

a) $\frac{3}{4} \overset{\times 2}{=} \frac{6}{8}$ $\quad\quad$ b) $\frac{10}{7} \overset{\times 10}{=} \frac{100}{70}$

choose any value to multiply to num & den.

c) $\frac{50}{100} \overset{\div 10}{=} \frac{5}{10}$ $\quad\quad$ d) $\frac{-4}{5} \overset{\times 2}{=} \frac{-8}{10}$

or you can divide both num & den by a common factor

ex: find the missing values in the following proportions (aka equivalent frac)

a) $\frac{2}{3} \overset{\times 4}{=} \frac{?}{12}$ (8)

how many 3's are needed to get 12
4 so ×4 to both num & deno.

OR

$\frac{2}{3} = \frac{?}{12}$ (8)

Trick: find values equal sign and fraction. them. Then by remaining value

CROSS Multiply & DIVIDE

$12 \times 2 = 24$
$\div 3$
8

ex: Solve using Cross Multiply and Divide:

a) $\frac{4}{5} = \frac{?}{25}$ (20)

$25 \times 4 \div 5$
$100 \div 5$

b) $\frac{1}{7} = \frac{6}{42}$ (? = 7)

$1 \times 42 \div 6$
$42 \div 6$