

Solving Proportions

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Proportion- An equation stating 2 ratios (or rates) are equivalent (equivalent fractions)

(x) $\frac{2}{4} = \frac{1}{2}$
 $0.5 = 0.5$

$\frac{2}{4} = \frac{?}{8}$
 ? = 4
 x2

$\frac{1}{3} = \frac{x}{12}$
 x = 4
 x4

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To check for proportionality → Cross Multiply

(x) ~~$\frac{5}{2} = \frac{15}{6}$~~
 30 30
 $2.5 = 2.5$
 Yes!

$\frac{4}{5} = \frac{16}{20}$
 Yes!

$\frac{18}{24} = \frac{35}{43}$

$0.75 \neq 0.813...$
 No!

~~$\frac{36}{15} = \frac{14}{4}$~~
 $144 \neq 210$
 No!

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Finding a Missing value:

Example	Steps
$\frac{x}{4} = \frac{9}{10}$ $36 = 10 \cdot x$ $36 \div 10$ $x = 3.6$	1. Cross Multiply 2. Divide by the number with the letter

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Practice:

① ~~$\frac{3}{34} = \frac{5}{x}$~~

$$170 = 3 \cdot x$$

$$170 \div 3 =$$

$$x = 56 \frac{2}{3}$$

② ~~$\frac{3}{x} = \frac{7}{8}$~~

$$24 = 7 \cdot x$$

$$24 \div 7$$

$$x = 3 \frac{3}{7}$$

Sep 17-11:02 AM