

2.3 Proportional Reasoning

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Proportion a relationship that says that 2 ratios or 2 rates are equal
can be written in fraction form

ex $\frac{2}{3} = \frac{6}{9}$ $\frac{2 \text{ km}}{3 \text{ h}} = \frac{6 \text{ km}}{9 \text{ hr}}$

(Red arrows show 2 to 6 is $\times 3$ and 3 to 9 is $\times 3$)

Ex #1

Determine the value of x

a) $\frac{1}{2} = \frac{x}{10}$

(Red arrows show 1 to x is $\times 5$ and 2 to 10 is $\times 5$)

$x = 5$

b) $\frac{5}{30} = \frac{24}{x}$

simplify
 \downarrow
 $\frac{1}{6} = \frac{24}{x}$

(Red arrows show 1 to 24 is $\times 24$ and 6 to x is $\times 24$)

$x = 144$

c) $\frac{18}{4} = \frac{x}{2}$

$\frac{18}{4} = \frac{x}{2}$

(Red arrows show 18 to x is $\times 2$ and 4 to 2 is $\times 2$)

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