

Proportions

Proportion - ratios that are equivalent

Checking Proportions

$$\frac{3}{5} \stackrel{?}{=} \frac{12}{18}$$

$$3 \cdot 18 = 54 \neq 60 = 12 \cdot 5$$

Not a Proportion

$$\frac{8}{10} \stackrel{?}{=} \frac{20}{25}$$

$$8 \cdot 25 = 200 = 20 \cdot 10$$

Is a Proportion

Solving Proportions

Using Equivalency

$$\frac{n}{4} = \frac{6}{24}$$

$\div 6$ (from 6 to 24)

$\div 4$ (from 4 to 24)

$$n = 1$$

$$\frac{30}{x} = \frac{6}{11}$$

$\times 5$ (from 6 to 30)

$\times 5$ (from 11 to 55)

$$x = 55$$

$$\frac{25}{10} = \frac{5}{k}$$

$\div 5$ (from 25 to 5)

$\div 5$ (from 10 to 2)

$$k = 2$$

$$\frac{10}{4} = \frac{s}{12}$$

$\times 3$ (from 4 to 12)

$\times 3$ (from 10 to 30)

$$s = 30$$

Solve using equations

$$\frac{x}{15} = \frac{10}{6}$$

$$\frac{30}{y} = \frac{50}{60}$$