

4-4 Solving Proportions

Proportion - two ratios are equal

$$\frac{6}{8} = \frac{3}{4}$$

Cross Product (X)

$$\begin{array}{c} 72 \\ \nearrow \\ \frac{6}{9} \\ \searrow \\ 72 \end{array} \quad \begin{array}{c} \nearrow \\ \frac{8}{12} \\ \searrow \end{array}$$

yes proportion

4 Cross products are equal = 4

$$\frac{1}{2} = \frac{2}{4}$$

$$\frac{n}{4} = \frac{9}{10}$$

Red arrows indicate cross-multiplication: one arrow from n to 10 and another from 9 to 4 . The result 3.6 is written above the first arrow, and 36 is written above the second arrow.

$$4 \cdot 9 = 10n$$

$$\frac{36}{10} = \frac{10n}{10}$$

$$3.6 = n$$

$$\frac{3.6}{4.25} = \frac{9}{10}$$

$$\frac{n}{4} = \frac{9}{16}$$

A red arrow points from n to 16 , and another red arrow points from 9 to 4 . The result 3.6 is circled above the first arrow.

cross multiply and divide

d. $\frac{7}{d} = \frac{2}{3}$

$d = 10.5$

f. $\frac{14.7}{3} = \frac{n}{2.1}$

$n = 4.9$

e. $\frac{2}{24} = \frac{5}{y}$

$y = 85$

$$\frac{37}{60} = \frac{n}{925}$$