

March , 2015

Starter

Solve each proportion, using scale factors.

1. $\frac{n}{8} = \frac{2 \cdot 3}{2 \cdot 4}$

$$n = 6$$

2. $\frac{6}{5} = \frac{23}{2 \cdot n}$

$$5 = \frac{2n}{2}$$

$$2.5 = 2 \frac{1}{2} = n$$

3. $\frac{5 \cdot 6}{5 \cdot n} = \frac{5 \cdot 6}{4 \cdot 6}$

$$5n = \frac{24}{5}$$

$$n = 4 \frac{4}{5} \text{ or } 4.8$$

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

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

$$3 \frac{3}{5} \text{ or } 3.6 = n$$

Gaze

3/5 - Solving Percent Equations using Proportions

"Percent" means...

out of 100

You set up percent equations using proportions!

$$\frac{\textit{score}}{\textit{total}} = \frac{\%}{100}$$

If you got 22 out of 25 on a quiz, what percent is that?

$$\frac{22 \cdot 4}{25 \cdot 4} = \frac{\boxed{88}}{100} = 88\%$$

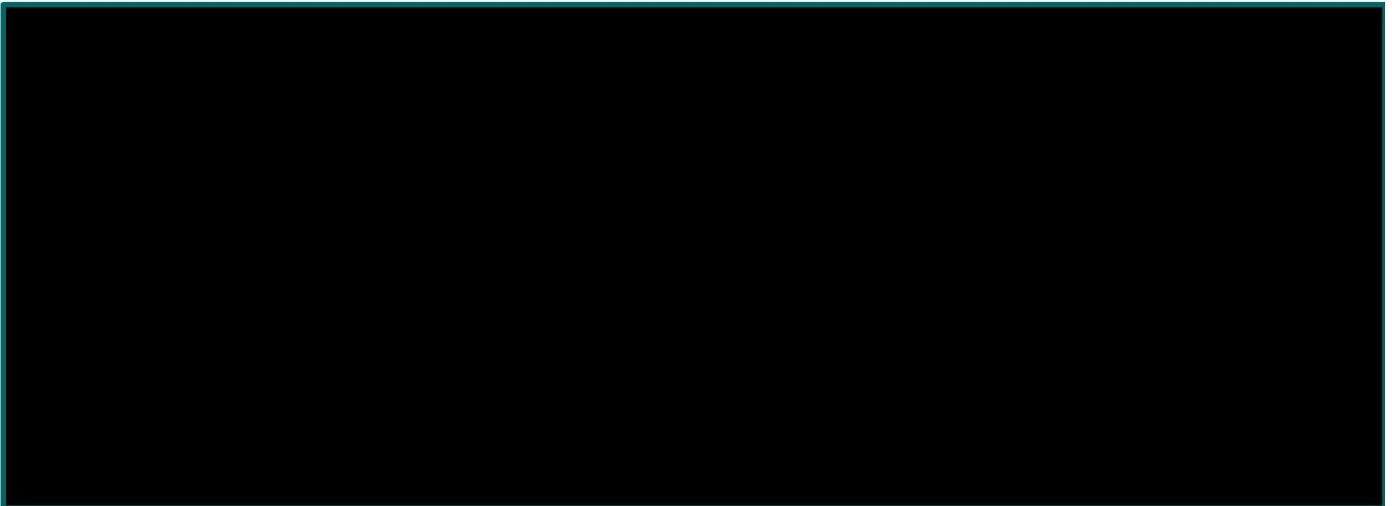
**Use scale factors. if possible, to make it easier.*

Circle what you would consider the total; underline what you would consider your score.

45 is what percent of 50?

75 is 38% of what number?

What is 85% of 46?



Solve each by setting up proportions and solving.

What number is 75% of 60?

$$\begin{array}{r} 100 \cdot n \\ \hline 100 \cdot 60 \end{array} = \frac{75 \cdot 60}{100}$$
$$100n = 75 \cdot 60$$
$$\frac{100n}{100} = \frac{4500}{100}$$
$$n = 45$$

40 out of 56 is what percent?

$$\frac{40}{56} = \frac{P}{100}$$
$$\frac{56P}{56} = \frac{4000}{56}$$
$$P = 71.4\%$$

$$4000 \div 56 = 71.428571$$

120 is 25% of what number?

$$\frac{120}{n} = \frac{25}{100}$$
$$\frac{25n}{25} = \frac{12000}{25}$$
$$n = 480$$

45 is what percent of 180?

$$\frac{45}{180} = \frac{P}{100}$$
$$\frac{180P}{180} = \frac{4500}{180}$$
$$P = 25\%$$

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

Solve each by setting up proportions and solving.

97 is 62% of what number?

$$\frac{97}{n} = \frac{62}{100}$$
$$\frac{62n}{62} = \frac{9700}{62}$$
$$n = 156.5$$

$$9700 \div 62 = 156.451613$$

84 is what percent of 86?

$$\frac{84}{86} = \frac{P}{100}$$
$$\frac{86P}{86} = \frac{8400}{86}$$
$$P = 97.7\%$$

$$8400 \div 86 = 97.674419$$

Homework

Due