

March 5, 2015 ^{5th} _{6th} Starter

Solve each proportion, using scale factors.

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

$n = 6$

2. $\frac{6}{5} = \frac{2 \cdot 3}{2 \cdot n}$

$5 = 2n$
 $2.5 = 2 \frac{1}{2} = n$

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

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

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

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

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

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

Gaze

3/5 - Solving Percent Equations using Proportions

"Percent" means...

out of 100

You set up percent equations using proportions!

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

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? $\frac{45}{50}$

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?

$$\frac{100 \cdot n}{100 \cdot 60} = \frac{75 \cdot 60}{100 \cdot 60}$$

$$\frac{100n}{100} = \frac{4500}{100}$$

$$n = 45$$

is
of

40 out of 56 is what percent?

%
100

$$\frac{40}{56} = \frac{P}{100}$$

$$56P = 4000$$

$$P = 71.4\%$$

$$4000 \div 56 = 71.428571$$

120 is 25% of what number?

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

$$\frac{25n}{25} = \frac{12000}{25}$$

$$n = 480$$

$$12000 \div 25 = 480$$

45 is what percent of 180?

$$\frac{45}{180} = \frac{P}{100}$$

$$\frac{180P}{180} = \frac{4500}{180}$$

$$P = 25\%$$

$$4500 \div 180 = 25$$

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

WS2 - yellow

Due Monday