

March 5, 2015^{4th}

Starter

Solve each proportion, using scale factors.

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

~~6 = 2 × 3~~
~~8 = 2 × 4~~

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

~~2 | 2.5~~
~~0.0~~
~~4~~
~~10~~

$5 = 2n$
 $n = 2.5$

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

$4.5 \times n$

$5 \overline{) 24.0}$
 $\underline{20}$
 40
 $\underline{40}$
 0

$5n = 24$
 $n = 4.8$ or $\frac{44}{9}$

4. $\frac{2 \times 9}{4 \times 5} = \frac{n \times 5}{4 \times 5}$

~~3.6 × 10~~

$5 \overline{) 18.0}$
 $\underline{15}$
 30

$18 = 5n$

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

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?

What other situations could be used to describe the sentence? Discuss your ideas with your partner.

of candies eaten

pip chart



Solve each by setting up proportions and solving.

What number is 75% of 60?

$$\frac{100 \cdot n}{60} = \frac{75 \cdot 60}{100}$$
$$\frac{100n}{100} = \frac{4500}{100}$$
$$n = 45$$

40 out of 56 is what percent?

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

$$4000 \div 56 = 71.4285711$$

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

Yellow WS2

Due Monday