

REVIEW: Percents and Proportions

Name _____

Key Concept and Vocabulary

To represent “ a is p percent of w ,” use a proportion.

part of the whole

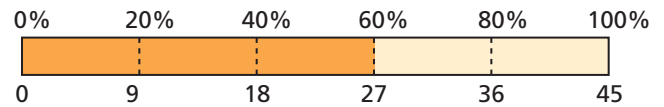
whole

$$\frac{a}{w} = \frac{p}{100}$$

percent



Visual Model



27 is 60% of 45.

Skill Examples

1. $\frac{36}{50} = \frac{p}{100}$

$$100 \cdot \frac{36}{50} = 100 \cdot \frac{p}{100}$$

$$72 = p$$

So, 36 is 72% of 50.

2. $\frac{a}{36} = \frac{20}{100}$

$$36 \cdot \frac{a}{36} = 36 \cdot \frac{20}{100}$$

$$a = 7.2$$

So, 7.2 is 20% of 36.

Application Example

3. A basketball player makes 45%, or 9 shots, of her attempted shots. How many shots did the basketball player attempt?

$$\frac{9}{w} = \frac{45}{100}$$

$$9 \cdot 100 = w \cdot 45$$

$$900 = 45w$$

$$\frac{900}{45} = \frac{45w}{45}$$

$$20 = w$$

- So, The basketball player attempted 20 shots.



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Check your answers at BigIdeasMath.com.

Write and solve a proportion to answer the question.

4. 68 is what percent of 80?

85%

6. 36 is 16% of what number?

225

8. What number is 64% of 40?

25.6

5. What number is 25% of 116?

29

7. 48 is what percent of 128?

37.5%

9. 77 is 55% of what number?

140

10. **PLAY** Students are auditioning for a play. Of the 60 students auditioning, 12 will get a part in the play. What percent of the students who audition will get a part in the play?

20%

11. **HOMEWORK** You have completed 60% of your English homework. The assignment has 25 questions. How many questions are left? 10