

NAME _____

Module 7 Ratio, Proportion, and Percent
Lesson 6 Using Percent Equations

Guided Practice

7.6

Set 1

1 What is 12% of 50?

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$
$$\frac{?}{50} = \frac{12}{100}$$
$$\frac{6}{50} = \frac{12 \div 2}{100 \div 2}$$

6 is 12% of 50.

2 There are 75 questions on the Advanced Robotics exam. Sunny took the exam and got 20% of the questions wrong. How many questions did Sunny get wrong?

$$\begin{aligned} & 20\% \text{ of } 75 \\ & 0.2 \times 75 = 15 \end{aligned}$$

Sunny got 15 questions wrong.

3 Mr. Marks planned a field trip for his students. A total of 80 students are in his classes, and 65% of the students are going on the trip. How many students are going on the field trip?

$$\begin{aligned} & 65\% \text{ of } 80 \\ & 0.65 \times 80 = 52 \end{aligned}$$

Fifty-two students are going on the field trip.

Set 2

- 1 What percent of 210 is 147?

$$\begin{array}{r} \frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100} \\ \frac{147}{210} = \frac{?}{100} \\ \frac{147 \div 2.1}{210 \div 2.1} = \frac{70}{100} \end{array}$$

70% of 210 is 147.

- 2 Horace got 20 out of 25 questions on his reading test correct. What percent of the questions did he answer correctly?

$$\begin{array}{r} \frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100} \\ \frac{20}{25} = \frac{?}{100} \\ \frac{20 \times 4}{25 \times 4} = \frac{80}{100} \end{array}$$

Horace answered 80% of the questions correctly.

- 3 What percent of five is 35?

$$\begin{array}{r} \frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100} \\ \frac{35 \times 20}{5 \times 20} = \frac{700}{100} \end{array}$$

700% of 5 is 35.

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Set 3

1 Forty percent of what number is 120?

$$\begin{aligned} \frac{\text{part}}{\text{whole}} &= \frac{\text{percent}}{100} \\ \frac{120}{w} &= \frac{40}{100} \\ \frac{120}{300} &= \frac{40 \times 3}{100 \times 3} \end{aligned}$$

Forty percent of 300 is 120.

2 A basketball player made 12 free throws. She made 60% of the free throws she attempted. How many free throws did the basketball player attempt?

$$\begin{aligned} \frac{\text{part}}{\text{whole}} &= \frac{\text{percent}}{100} \\ \frac{12}{w} &= \frac{60}{100} \\ \frac{12}{20} &= \frac{60 \div 5}{100 \div 5} \end{aligned}$$

The player attempted 20 free throws.

3 The cost of a television is \$500 at Space TV. This is 200% of the cost at the International Space Auction. What is the cost of the television at the auction?

Two hundred percent% of what number is 500?

$$\begin{aligned} 2 \times z &= 500 \\ 2 \div 2 \times z &= 500 \div 2 \\ 1 \times z &= 500 \div 2 \\ z &= 500 \div 2 = 250 \end{aligned}$$

$$\frac{500}{250} = \frac{200 \times 2.5}{100 \times 2.5}$$

The cost is \$250.

