NAME_____

Module 7 **Ratio, Proportion, and Percent**
Lesson 2 **Finding Percents**

Independent Practice 7.2

Write as a percent.

1. $\frac{15}{6}$

250%

2. 2 to 500

0.4%

3. 1 : 8

12.5%

Evaluate.

4. 50% of 64

32

5. $\frac{1}{10}\%$ of 16

0.016

6. 130% of 700

910

7. Salvador has 48 math problems in his homework set. He has completed 25% of the problems. How many problems has Salvador completed?

Salvador completed 12 problems.

8. The number of students in the sixth grade this year is 105% of the number in the sixth grade last year. Last year there were 80 sixth-graders. How many sixth-graders are in school this year?

There are 84 sixth-graders this year.

9. Marc is allowed to watch 90 minutes of television each day. He already watched 50% of his minutes today. His older brother Tyrone is allowed to watch 120 minutes of television each day and has already watched 75% of his minutes today. How many minutes does each brother have left?

Marc: 45 min left Tyrone: 30 min left

Determine if the ratios are in proportion.

10. $\frac{4}{5}$ and $\frac{8}{15}$

NO

11. $\frac{27}{12}$ and $\frac{45}{20}$

YES

12. $\frac{18}{9}$ and $\frac{6}{3}$

YES

13. The ratio of red to blue balloons is $\frac{12}{15}$ in the dining room and $\frac{15}{25}$ in the kitchen. Are the ratios in proportion?

NO

Journal

1. Tell how you can determine which ratio, without actually finding the equivalent percents, is greater than 100%. Then, find each percent.

$\frac{5}{8}$ $\frac{8}{5}$

2. What has to be true about the two terms of a ratio for the ratio to equal 100%? Give an example.

3. Duncan calculated 200% of 30 to be six. Tell how you know, without doing any work, that his answer is wrong. Then, find the correct answer.

4. Explain two ways to show that $\frac{8}{18} = \frac{12}{27}$ is a proportion.

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Cumulative Review

Write as a fraction or mixed number.

1. 0.4

$\frac{2}{5}$

2. 6.5

$6\frac{1}{2}$

3. 0.05

$\frac{1}{20}$

Identify the property shown.

4. $4 + 1 = 1 + 4$

Commutative Property of Addition

5. $2 \times (3 \times 4) = (2 \times 3) \times 4$

Associative Property of Multiplication

6. $5(6 + 1) = 5(6) + 5(1)$

Distributive Property of Multiplication over Addition

Round to the nearest tenth and nearest hundredth.

7. 523.126

523.1, 523.13

8. 0.094

0.1, 0.09

Add or subtract.

9. $10 - 0.023$

9.977

10. $\frac{1}{3} + \frac{4}{7}$

$\frac{19}{21}$

Add or subtract.

11. $14 - 3\frac{1}{2}$

$10\frac{1}{2}$

12. $0.35 + 1.6 + 3$

4.95

Possible Journal Answers

1. The ratio $\frac{8}{5}$ is greater than 100% because it is an improper fraction that can be written as a mixed number. The whole number part will equal at least 100% and the fraction part will make the percent even greater.

$$\frac{5}{8} = 0.625 = 62.5\%$$

$$\frac{8}{5} = 1\frac{3}{5} = 1.6 = 160\%$$

2. To equal 100%, the two terms of the ratio must be the same number. The fraction will equal one, which is equivalent to 100%. For example:

$$5 \text{ to } 5 = \frac{5}{5} = 1 = 100\%$$

3. One hundred percent of a number is equal to that number, so 200% of the number must be greater than that number. Therefore, the answer must be greater than 30. The correct answer is 60.

$$200\% \text{ of } 30$$
$$2 \times 30$$
$$60$$

4. One way is to simplify each fraction and show they are the same.

$$\frac{8 \div 2}{18 \div 2} = \frac{4}{9} \text{ and } \frac{12 \div 3}{27 \div 3} = \frac{4}{9}$$

Another way is to show that the cross products are equal.

$$8 \times 27 = 216 \text{ and } 18 \times 12 = 216$$