

Lesson 1 Reteach

Ratios

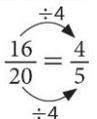
A **ratio** is a way to compare two quantities using division. Ratios can be written in a number of ways.

The ratio representing 7 out of 12 can be written as: 7 to 12, 7:12, and $\frac{7}{12}$.

Ratios are usually written as fractions in simplest form when the first number being compared is less than the second number being compared.

Example 1: Express the ratio *16 correct answers out of 20 questions* as a fraction in simplest form. Explain its meaning.

$$\frac{\text{correct answers}}{\text{number of questions}} = \frac{16}{20} = \frac{4}{5}$$



Divide the numerator and denominator by the GCF, 4.

The ratio of correct answers to questions is 4 to 5. This means that for every 5 questions, 4 were answered correctly. Also, $\frac{4}{5}$ of the questions were answered correctly.

When a ratio involves measurements, both quantities should have the same unit of measure. When the quantities have different units of measure, you must convert one unit to the other. It is usually easiest to convert the larger unit to the smaller unit.

Example 2: Express the ratio *6 feet to 15 inches* as a fraction in simplest form.

$$\frac{6 \text{ feet}}{15 \text{ inches}}$$

Write the ratio as a fraction.

$$= \frac{72 \text{ inches}}{15 \text{ inches}}$$

Convert 6 feet to 72 inches.

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

Divide the numerator and denominator by the GCF, 3.

Exercises

Express each ratio as a fraction in simplest form.

1. 4 weeks to plan 2 events
2. 9 children to 24 adults
3. 8 teaspoons to 12 forks
4. 16 cups to 10 servings
5. 7 shelves to 84 books
6. 6 teachers to 165 students
7. 14 inches to 3 feet
8. 20 inches to 2 yards
9. 9 feet to 12 inches
10. 4 gallons to 2 quarts
11. 3 pints to 2 quarts
12. 22 ounces to 5 pounds