

# Lesson 6 Reteach

## Equivalent Ratios

Two ratios are said to be **equivalent ratios** if they have the same unit rate.

### Example 1

Determine if each pair of rates are equivalent. Explain your reasoning.

\$35 for 7 balls of yarn; \$24 for 4 balls of yarn.

Write each rate as a fraction. Then find its unit rate.

$$\frac{\$35}{7 \text{ balls of yarn}} = \frac{\$5}{1 \text{ ball of yarn}}$$

$\xrightarrow{\div 7}$        $\xrightarrow{\div 7}$   
 $\xleftarrow{\div 7}$        $\xleftarrow{\div 7}$

$$\frac{\$24}{4 \text{ balls of yarn}} = \frac{\$6}{1 \text{ ball of yarn}}$$

$\xrightarrow{\div 4}$        $\xrightarrow{\div 4}$   
 $\xleftarrow{\div 4}$        $\xleftarrow{\div 4}$

Since the rates do not share the same unit rate, they are not equivalent.

### Example 2

Determine if each pair of ratios are equivalent. Explain your reasoning.

8 boys out of 24 students; 4 boys out of 12 students

Write each ratio as a fraction.

$$\frac{8 \text{ boys}}{24 \text{ students}} = \frac{4 \text{ boys}}{12 \text{ students}} \quad \leftarrow \text{The numerator and the denominator are divided by the same number.}$$

$\xrightarrow{\div 2}$        $\xrightarrow{\div 2}$   
 $\xleftarrow{\div 2}$        $\xleftarrow{\div 2}$

Since the fractions are equivalent, the ratios are equivalent.

### Exercises

Determine if each pair of ratios or rates are equivalent. Explain your reasoning.

1. \$12 saved after 2 weeks; \$36 saved after 6 weeks
2. \$9 for 3 magazines; \$20 for 5 magazines
3. 135 miles driven in 3 hours; 225 miles driven in 5 hours
4. 24 computers for 30 students; 48 computers for 70 students