



Name \_\_\_\_\_ Date \_\_\_\_\_

# Ratios and Rates (Pages 104–106)

<b>Ratio</b>	A ratio compares two numbers by division. $\frac{27}{100}$ or 27 out of 100
<b>Rate</b>	A rate is a special kind of ratio. A rate compares two measurements with different units, such as miles to the gallon or cents per pound.
<b>Unit Rate</b>	When a rate is simplified so that it has a denominator of 1, it is called a <b>unit rate</b> .

## EXAMPLES

- A** Express 12 winners for every 90 people who enter as a rate in simplest form.

Write a fraction for the rate:  $\frac{12}{90}$ .

Divide numerator and denominator by the GCF to simplify. The GCF of 12 and 90 is 6.

$\frac{2}{15}$  is the rate in simplest form.

- B** Express the rate \$6 for 3 pounds as a unit rate.

Write a rate:  $\frac{\$6}{3 \text{ pounds}}$ .

Divide numerator and denominator by 3 to get a denominator that is 1 unit.

The unit rate is \$2 per pound.

## Try These Together

1. Express 16 out of 32 in simplest form.

*HINT: Write a fraction and simplify.*

2. Express 6 wins in 10 games in simplest form.

*HINT: Write a fraction and simplify.*

## PRACTICE

**Express each ratio or rate in simplest form.**

3. 3 to 15                      4. 3 boys: 24 girls                      5. 13 meters per second  
6. 56 dogs to 48 cats                      7. 4 feet: 16 feet                      8. 12 books for 4 students

**Express each rate as a unit rate.**

9. \$18.00 for 3 pounds                      10. \$19.50 for 15 gallons                      11. \$1.68 for 8 ounces  
12. \$2.00 for 10 minutes                      13. 8 feet in 2 seconds                      14. 25 magazines in 5 days

15. **Sports** Gloribel ran the 400-meter dash in 80 seconds. How many meters did she run per second?



16. **Standardized Test Practice** Suppose that a bottle of peppercorn ranch salad dressing costs \$2.65 at the grocery store. If there are 20 ounces in the bottle, what is the price of the salad dressing per ounce? Round to the nearest cent.

- A** \$0.14                      **B** \$0.12                      **C** \$0.15                      **D** \$0.13

<p><b>Answers:</b> 1. <math>\frac{2}{3}</math> 2. <math>\frac{3}{5}</math> 3. <math>\frac{1}{4}</math> 4. <math>\frac{8}{1}</math> 5. <math>\frac{1}{13}</math> 6. <math>\frac{2}{7}</math> 7. <math>\frac{1}{4}</math> 8. <math>\frac{1}{3}</math> 9. \$6.00 per pound 10. \$1.30 per gallon 11. \$0.21 per ounce 12. \$0.20 per minute 13. 4 feet per second 14. 5 magazines per day 15. 5 16. D</p>
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