



Study Guide

Rates

A rate is a ratio of two measurements with different units.

Example 1 Six bottles of mineral water cost \$2.59.

The ratio 6 bottles for \$2.59 is a rate.

A rate in which the denominator is 1 is a **unit rate**.

Example 2 Express 6 bottles for \$2.59 as a unit rate.

$$\begin{aligned} \frac{\text{price}}{\text{bottles}} &\rightarrow \frac{\$2.59}{6} = \frac{\$2.59 \div 6}{6 \div 6} \\ &\approx \frac{\$0.4317}{1} \end{aligned}$$

The unit rate is about \$0.43 per bottle.

Express each rate as a unit rate.

- 120 miles in 3 hours
- 72 apples for 12 people
- \$1 for 3 pounds of bananas
- 36 breaths in 3 minutes
- \$1.69 for 12 muffins
- 45 kilometers in 5 hours
- 352 steps in 4 minutes
- \$9.96 for 6 roses
- 279 students for 9 teachers
- 1,520 people in 5 square miles
- \$450 for 6 days
- 7 inches of rain in 4 days