

## Enrich

## Percent and Per Mill

A **percent** is a ratio that compares a number to 100.

$$\frac{83}{100} = 83 \text{ percent} = 83\% = 0.83$$

A ratio that compares a number to 1,000 is called a **per mill**. Just like percent, the ratio *per mill* has a special symbol, ‰.

$$\frac{83}{1,000} = 83 \text{ per mill} = 83‰ = 0.083$$

Throughout the world, the ratio that is used most commonly is percent. However, in some countries, you will find both ratios in use.

**Express each per mill as a decimal.**

1.  $325‰$

2.  $71‰$

3.  $6‰$

4.  $900‰$

5.  $20‰$

6.  $100‰$

**Express each per mill as a fraction in simplest form.**

7.  $47‰$

8.  $400‰$

9.  $100‰$

10.  $25‰$

11.  $150‰$

12.  $30‰$

**Express each fraction as a per mill.**

13.  $\frac{729}{1,000}$

14.  $\frac{58}{100}$

15.  $\frac{7}{10}$

16.  $\frac{1}{2}$

17.  $\frac{3}{4}$

18.  $\frac{5}{8}$

19.  $\frac{4}{5}$

20.  $\frac{17}{20}$

21.  $\frac{1}{3}$

**22. CHALLENGE** In the United States, you will sometimes find the **mill** used as a monetary unit. What amount of money do you think is represented by 1 mill?