

Chapter 4

Fractions, Decimals, and Percents

4.1

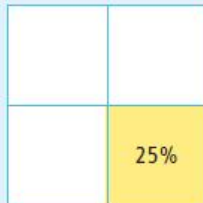
Literacy Link

Ascending order
means from least to
greatest.

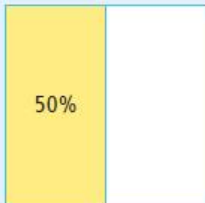
Descending order
means from greatest
to least.

Key Ideas

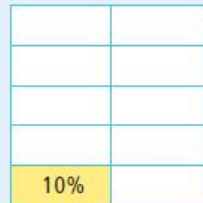
- A visual model can help you solve problems involving percents.
- Every percent has an equivalent decimal and fraction value.



25% is 0.25 or $\frac{1}{4}$



50% is 0.50 or $\frac{1}{2}$



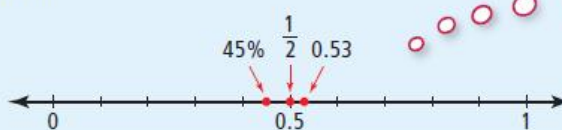
10% is 0.10 or $\frac{1}{10}$



- You can use place value or a number line to compare fractions, decimals, and percents.

$\frac{1}{2}$ is between 45% and 0.53.

$$45\% < \frac{1}{2} < 0.53$$



45% is 0.45
 $\frac{1}{2}$ is 0.5

4.2

terminating decimal

- a decimal number in which the digits stop
- examples include 0.4, 0.86, 0.125

Key Ideas

- To change a fraction to a decimal number, divide the numerator by the denominator.

$$\frac{3}{8} = 3 \div 8 = 0.375$$
- Repeating decimal numbers can be written using a bar notation.

$$\frac{1}{3} = 0.333... = 0.\overline{3}$$
- To express a terminating decimal number as a fraction, use place value to determine the denominator.

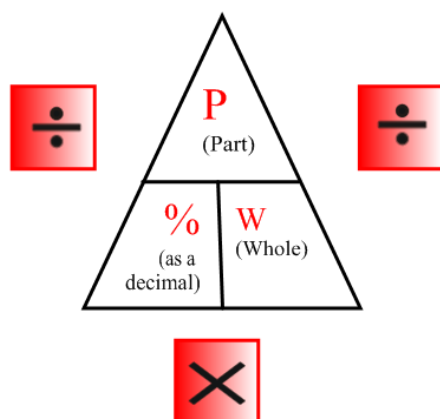
$$0.9 = \frac{9}{10} \quad 0.59 = \frac{59}{100} \quad 1.463 = \frac{1463}{1000}$$
- You can use mental math to estimate percents.

4.3

Key Ideas

- Decimal numbers and percents are often easier to compare than fractions.
- When you round a decimal value, the number becomes approximate. Fractions are exact numbers.

Percent Formulas



$$\frac{\%}{100} = \frac{\text{Part (is)}}{\text{Whole (of)}}$$

1. Multiply the 2 diagonal numbers
2. Divide by the 3rd number