

Section Overview



Fractions, Decimals, and Percents

Lessons 6-1, 6-2, 6-3

Why? When you are solving problems or making mental calculations it is helpful to write a fraction, decimal, or percent in an equivalent form.

Writing Equivalent Forms	
From Decimal to Percent	$0.86 = \frac{86}{100} = 86\%$
From Percent to Decimal	$23\% = \frac{23}{100} = 0.23$
From Percent to Fraction	$45\% = \frac{45}{100} = \frac{9}{20}$
From Fraction to Percent	$\frac{7}{8} = 0.875 = 87.5\%$

Methods of Estimating

1. Use compatible numbers.
2. Round to common percents (e.g., 10%, 25%, $33\frac{1}{3}\%$).
3. Break percents into smaller parts (e.g., 1%, 5%, 10%).

Percent of a Number

Lesson 6-4

Why? Information is often given in percents. You need to be able to find the percent of a number to determine what the sales tax is on a purchase or what the savings is during a sale.

Two methods for finding the percent of a number are presented.

Proportion Method

Find 38% of 60.

Use a proportion. \rightarrow

$$\frac{38}{100} = \frac{n}{60}$$

$$100n = 38 \cdot 60$$

$$100n = 2,280$$

$$n = 22.8$$

38% of 60 is 22.8.

Equation Method

Find 53% of 12.

$$n = 0.53 \cdot 12$$

$$n = 6.36$$

53% of 12 is 6.36.

Use a decimal.

Percent Problems

Lesson 6-5

Why? Many real-world situations, such as figuring profit and loss, discounts, and taxes, involve solving equations with percents.

Either a proportion or a decimal can be used to solve percent problems.

Find the percent.

62 is what percent of 160?

Use a proportion. \rightarrow

$$\frac{n}{100} = \frac{62}{160}$$

$$160n = 62 \cdot 100$$

$$160n = 6,200$$

$$\frac{160n}{160} = \frac{6,200}{160}$$

$$n = 38.75$$

62 is 38.75% of 160.

Find the number.

28 is 32% of what number?

$$28 = 0.32n$$

$$\frac{28}{0.32} = \frac{0.32n}{0.32}$$

$$87.5 = n$$

28 is 32% of 87.5.

Use a decimal.