Name _____

SKILL S73

# Write Percents as Fractions and Decimals

OBJECTIVE Write a fraction to represent a percent.

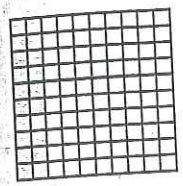
A **percent** is a number out of 100. You can write a percent as a fraction or a decimal by first writing the percent as a ratio that compares a number to 100.

How can 20% and 150% be represented as fractions and decimals?

## A Fractions

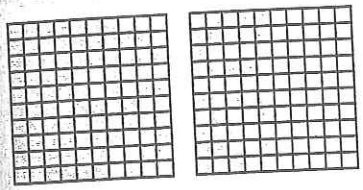
Write 20% as a fraction.

20% is 20 out of 100.



$20\% = \frac{20}{100}$ 0.2

150% is 100 out of 100 plus 50 out of 100.



Write 150% as a fraction.

$150\% = \frac{100}{100} + \frac{50}{100}$

$= 1 + \frac{50}{100}$

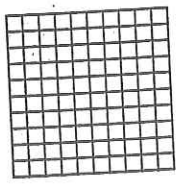
$= 1\frac{1}{2}$

## B Decimals

Write 20% as a fraction. 20% is 20 out of 100.

$20\% = \frac{20}{100}$

Use place value to write $\frac{20}{100}$ as a decimal.



$20\% = \frac{20}{100} = 0.2$

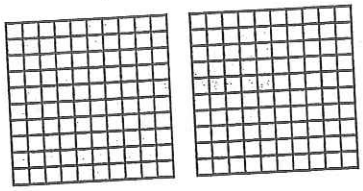
150% is 100 out of 100 plus 50 out of 100.

Write 150% as a fraction.

$150\% = \frac{100}{100} + \frac{50}{100}$

Use place value to write $1\frac{50}{100}$ as a decimal.

$150\% = 1\frac{50}{100} = 1.5$



## Try This!

**Write the percent as a fraction.**

1. $90\% = \frac{90}{100}$

2. $25\% = \frac{25}{100}$

**Write the percent as a decimal.**

3. $45\% = 0.45$

4. $76\% = 0.76$



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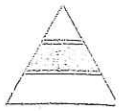

SKILL 574

# Percent of a Quantity

OBJECTIVE Find a percent of a quantity.

You can use ratios to find the percent of a quantity. Before you can multiply, you must change the percent to a rate out of 100.

What is 1.4% of 250?

| | |
|---|---|
| **STEP 1**<br>Write the percent as a rate out of 100. | $1.4 = \frac{140}{100}$ |
| **STEP 2**<br>Change the numerator to a whole number.<br>The numerator has a digit in the tenths place. Multiply the numerator and denominator by 10 to get a whole number in the numerator. | $\frac{140}{100} = \frac{(140 \times 10)}{(100 \times 10)} = \frac{1400}{1,000}$ |
| **STEP 3**<br>Write the multiplication problem. | $\frac{1400}{1,000} \times 250$ |
| **STEP 4**<br>Multiply. | $\frac{1400}{1,000} \times 250 = \frac{3,500}{1,000} = 3.5$ |

## Try This!

**Find the percent of the quantity.**

**1.** 10% of 50 5

$\frac{10}{100} \cdot \frac{50}{1} = \frac{50}{10} = 5$

**2.** 4% of 200 8

$\frac{4}{100} \cdot \frac{200}{1} = \frac{800}{100} = 8$

**3.** 0.5% of 80 0.25

$\frac{5}{1000} \cdot \frac{80}{1} = \frac{400}{1000} = \frac{4}{100} = \frac{1}{25}$

**4.** 2.5% of 800 2,000

$\frac{250}{100} = \frac{250 \times 10}{100 \times 10} = \frac{2500}{1000} \cdot \frac{800}{1} = \frac{2000}{10} = 2,000$