

# Unit 5: Percent

*I can solve real-world percent problems.*

**Percent Definition:** A ratio that compares a number to 100.

## To Convert a Fraction to Percent:

- 1) Divide the numerator by the denominator.
- 2) Multiply by 100. (move decimal over 2 spaces).

**Examples:**

$\frac{\text{PART}}{\text{WHOLE}}$

The Waynesville High School library has 500 books. 450 books were checked out this year. What percentage of the books were checked out this year?

$$\frac{450}{500} = 0.90 = 90\%$$

**You Try:** The seventh graders set a goal to collect 250 cans for their school's food drive. They collected 275 cans.

What percentage of their goal did they collect?

$$\frac{275}{250} = 1.1 = 110\%$$

A service club is planting seedlings as part of an erosion prevention project. Out of 240 newly planted seedlings, 30 are laurel sumac. What percent of the seedlings are laurel sumac?

$$\frac{30}{240} = 0.125 = 12.5\%$$

**You Try:** Mrs. Loya sponsors the Spanish club at Central Middle School. The club has 8 members who are sixth graders, 12 members who are seventh graders, and 10 members who are eighth graders. What percent of the Spanish club members are seventh graders?

$$\frac{12}{30} = 0.4 = 40\%$$

## Estimating Percentages

A store sold 28 boxes of juice from a case containing 48 boxes. Approximately what percent of the case of juice has been sold?

- A) 20%
- B) 30%
- C) 40%
- D) 60%

## Two Step Percent Problems:

The eighth grade basketball team had tryouts last week. 17 out of 20 students who tried out made the team. What percent of students who tried out did NOT make the team?

$$\frac{3}{20} = 0.15 = 15\%$$

**You Try (WHOLE PAGE):**

The eighth grade basketball team had tryouts last week. 17 out of 25 students who tried out made the team. What percent of students who tried out did NOT make the team?

$$\frac{8}{25} = 0.32 = 32\%$$

Mr. Hale has 150 students total. If 120 students turned in their Weekly Review, what percent of his students did not turn in their Weekly Review?

$$\frac{30}{150} = 0.2 = 20\%$$

1.) Write the following percentages as a fraction in simplest form:

a) 45% =  $\frac{9}{20}$

b) 13.5% =  $\frac{27}{200}$

c) 120% =  $\frac{6}{5}$  or  $1\frac{1}{5}$

d) 80% =  $\frac{4}{5}$

2.) Write the following fractions as a percent:

a)  $\frac{2}{5} = 40\%$

b)  $\frac{35}{60} = 58.3\%$

c)  $1\frac{4}{5} = 180\%$

d)  $\frac{3}{8} = 37.5\%$

3.) Convert the following percentages to decimals:

a) 71% = 0.71

b) 213% = 2.13

c) 8% = 0.08

d) 16% = 0.16

4.) Write the following decimals as percentages:

a) 1.25 = 125%

b) 0.03 = 3%

c) 0.43 = 43%

d) 4.07 = 407%