

Name _____

Pre-Algebra Notes
Week 8: Lessons 7.2 and 7.3

Percents and Proportions (7.2)

$$\frac{\text{part}}{\text{base}} \qquad \frac{a}{b} = \frac{p}{100} \qquad \text{" } a \text{ is } p \text{ percent of } b \text{"}$$

Example

1. Finding a Percent

What percent of 7 is 4?

$$\frac{a}{b} = \frac{p}{100}$$

Extra Practice

- What percent of 72 is 54?

- What percent of 35 is 7?

2. Finding a Part of a Base

What number is 24% of 200?

$$\frac{a}{b} = \frac{p}{100}$$

3. Finding a Base

In a heptathlon, an athlete earns points in seven track-and- field events.

Suppose an athlete earns 836 points in the 100 meter hurdles. This score makes up 16% of the total score. What is the total score?

$$\frac{a}{b} = \frac{p}{100}$$

Extra Practice

- What number is 18% of 50?
- 105 is 84% of what number?

3 Types of Percent Problems

Percent Problem	Example	Proportion
Find a percent	What percent of 48 is 12?	$\frac{12}{48} = \frac{p}{100}$
Find a part of a base	What number is 15% of 80?	$\frac{a}{80} = \frac{15}{100}$
Find a base	20 is 30% of what number?	$\frac{20}{b} = \frac{30}{100}$

Percents and Decimals (7.3)

- To write a decimal as a percent, move the decimal point _____
_____ to the _____ and write a percent sign.

- To write a percent as a decimal, move the decimal point _____
_____ to the _____ and remove the percent sign.

decimal \Rightarrow percent - two places to the right

percent \Rightarrow decimal - two places to the left

Example

1. Writing Decimals as Percents

Write 0.62, 1, and 2.3 as percents

a.

b.

c.

2. Writing Percents as Decimals

Write 75%, 0.4%, 168% as decimals

a.

b.

c.

Percents greater than 100% are written as numbers greater than 1

Percents less than 1% are written as numbers less than 0.01

Extra Practice

Write the decimal as a percent or the percent as a decimal

Fractions, Decimals and Percents can all represent the same number

fraction \Rightarrow percent - first write the fraction as a decimal

3. Writing Fractions as Percents

Write $\frac{3}{8}$ and $\frac{5}{3}$ as percents

a.

b.

Extra Practice

4. Finding a Percent of a Number

We have done problems in the previous unit where you were asked to find 25% of 36

This works when you have a whole percent. When you have a decimal percent you will need to convert the decimal percent to a decimal, then multiply

Find 10.5% of 5600

Extra Practice

In a survey of 1100 adults, 2% chose cooking as their favorite leisure activity. How many adults chose cooking?