

Name: key
Date: _____

Mr. Johnson
Math 8

Lesson 5.3 – Solving Percent Problems



Investigate:

Complete the Investigate activity of page 248 of your textbook with a partner. Answer the three questions and record your solutions in the space below. Be prepared to present your solutions to the class.

Notes:

Percent problems can be broken into three different types:

- Where you are given the whole and a percent and you need to find that percent of the whole

Example: 80% of 40 is what?

$$\begin{array}{r} 0.80 \times 40 \\ = 32 \end{array}$$

*first ask students to estimate
if answer will be 740*

$$\% \times \# = \frac{\text{part}}{\text{whole}}$$

- Where you are given part of the whole and its equivalent percent and you need to find the whole

Example: 75% of a number is 33. What is the number?

$$\begin{array}{r} 33 \\ \hline 0.75 \\ = 24.75 \end{array}$$

- Where you are given part of the whole and the whole and you need to write the part as a percent of the whole

Example: 32 is what percent of 55?

$$\frac{32}{55} = 0.58 = 58\%$$

Another type of problem involving percents is to find the percent increase or percent decrease. It is calculated in the following way:

$$\text{Percent increase (\%)} = \frac{\text{increase in price}}{\text{original price}} \times 100$$

$$\text{Percent decrease (\%)} = \frac{\text{decrease in price}}{\text{original price}} \times 100$$

Example:

The price of a bottle of water increased from \$1.19 to \$1.49. What was the percent increase in the price?

Additional Examples:

1. A field goal kicker was successful 75% of the time. He made 51 field goals. How many kicks did he make in total?

$$\begin{aligned} \frac{\text{total}}{\text{kicks}} &= \frac{51}{0.75} \\ &= 68 \end{aligned}$$

(He missed 17)

2. Colton and Connor left their waitress a 15% tip. The tip was \$10.25. What was their total bill, not including the tip?

$$\begin{aligned} \text{bill} &= \frac{\$10.25}{0.15} \\ &= \$68.33 \end{aligned}$$

Assignment:

Pg. 252-255
#s 3-10, 13, 17, 19