7.4.7 Lesson Date_____

Markup and Markdown Problems

Student Objectives:

- I understand the terms *original price, selling price, markup, markdown, markup rate, and markdown rate.*
- I can identify the original price as the whole and can solve multistep markup and markdown problems.

Definitions

- A **markup** is the amount of increase in a price.
- A **markdown** is the amount of decrease in a price.
- The markup **rate** is the **percent** increase in the price, and the markdown **rate** (discount **rate**) is the **percent** decrease in the price.

Classwork

Example 1: A Video Game Markup

Games Galore Super Store buys the latest video game at a wholesale price of $\$30.00$. The markup rate at Games Galore Super Store is 40%. You use your allowance to purchase the game at the store. How much will you pay, not including tax?

a. Write and solve an equation to find the mark up of the game at Games Galore Super Store.

b. What was the total cost of the video game?

c. You and a friend are discussing markup rate. He says that an easier way to find the total with the markup is by multiplying the wholesale price of $\$30$ by 140%. Do you agree with him? Why or why not?

Example 2: Black Friday

A $\$300$ mountain bike is discounted by 30%, and then the new price is discounted an additional 10% for shoppers who arrive before 5:00 a.m.

a. Find the sale price of the bicycle.

b. In all, by how much has the bicycle been discounted in dollars? Explain.

c. After both discounts were taken, what was the total percent discount?

Exercise 1

Use the following table to calculate the markup or markdown rate. Show your work. Is the relationship between the original price and selling price proportional or not? Explain.

Original Price, m (in dollars)	Selling Price, p (in dollars)
$1,750	$1,400
$1,500	$1,200
$1,250	$1,000
$1,000	$800
750	600

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Homework Homework Homework Homework Homework

1. The cost of a New York Yankees baseball cap is $\$24.00$. The local sporting goods store sells it for $\$30.00$.
   a. Find the markup.

   b. Find the markup rate.

2. You have a coupon for an additional 25% off the price of any sale item at a store. The store has put a robotics kit on sale for 15% off the original price of $\$40$. What is the price of the robotics kit after both discounts?

3. A ski shop has a markup rate of 50%. Find the selling price of skis that cost the store owner $\$300$.

4. A shoe store has a markup rate of 75% and is selling a pair of shoes for $\$133$. Find the price the store paid for the shoes.