Lesson 6: Markup and Markdown Problems
Bellringer

(3 points) Mrs. Hamilton works for a real estate agency. She sold a house for $175,000. The agency’s fee for the sale was 4% of the sale price. Mrs. Hamilton received $4,725 of the agency’s fee as her commission. What percent of the agency’s fee did Mrs. Hamilton receive? Round your answer to the nearest tenth of a percent.
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Notes

Let’s Think:
Sam goes out to dinner and his original bill is $50.20, which of the options below is the better deal?

<table>
<thead>
<tr>
<th>“I will only pay 90% of my bill.”</th>
<th>“10% of my bill will be subtracted from the original total.”</th>
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How do the prices compare?

What does it mean to markup or markdown a price? Who would do that?

Markup ~ ____________________________________________________________

Markdown ~ _________________________________________________________

EX 1) Games Galore Super Store buys the latest video game at a wholesale price of $30.00. The markup rate at Game’s 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 price of the game at Games Galore Super Store.

b. What was the total markup of the video game? Explain.

c. You and a friend are discussing markup rate. He says that an easier way to find the total markup is by multiplying the wholesale price of $30.00 by 40%. Do you agree with him? Why or why not?
EX 2) A $300 mountain bike is discounted by 30%, and then discounted an additional 10% for shoppers who arrive before 5:00 a.m.

a. Find the sales 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?

EX 3) A car that normally sells for $20,000 is on sale for $16,000.

a. What is the percent markdown on the car?

b. By law, sales tax of 7.5% has to be applied to the discount price. What would be the total cost of the discounted car with tax?
Homework

1. A shoe store is selling a pair of shoes for $60 that has been discounted by 25%. What was the original selling price?

2. A store purchased a DVD for $15.00 and sold it to a customer for 50% more than the purchase price. The customer was then charged a 7% tax when the DVD was sold. What was the customer’s total cost for the DVD? Round your answer to the nearest cent.
   a. $23.57
   b. $24.08
   c. $7.50
   d. $23.55

3. Sally has a discount card that reduces the price of her grocery bill in a certain grocery story by 8%. If c represents the cost of Sally’s groceries, which expression represents Sally’s grocery bill?
   a. 0.08c
   b. 0.92c
   c. c – 0.08
   d. c + 0.92

4. Is a percent increase of a set of golf clubs from $250 to $750 the same as a markup rate of 200%? Explain.

5. A golf store purchases a set of clubs at a wholesale price of $250. Mr. Edmond learned that the clubs were marked up 200%. What is the retail price of the clubs? Is it possible to have a percent increase greater than 100%?
6. Tom sold action figures on his website. He bought the action figures for $35 each and included a 90% markup to get his selling price. To the nearest dollar, what was the selling price of one action figure?

Review:
7. Find the area of a circle whose radius is 9 cm.

8. Find the area of a circle whose circumference is 16 $\pi$ in.

9. Solve for $x$:

$$2x - 6 = 26$$
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Exit Ticket

1. A tennis supply store pays a wholesaler $90 for a tennis racquet and sells it for $144. What is the markup rate?