

Lesson Summary

- To find the markup or markdown of an item, multiply the whole by $(1 \pm m)$, where m is the markup/markdown rate.
- To apply multiple discount rates to the price of an item, you must find the first discount price and then use this answer to get the second discount price.

Problem Set

1. 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?
2. A sign says that the price marked on all music equipment is 30% off the original price. You buy an electric guitar for the sale price of \$315.
 - a. What is the original price?
 - b. How much money did you save off the original price of the guitar?
 - c. What percent of the original price is the sale price?
3. The cost of a New York Yankee baseball cap is \$24.00. The local sporting goods store sells it for \$30.00. Find the markup rate.

4. Write an equation to determine the selling price in dollars, p , on an item that is originally priced s dollars after a markdown of 15%.
- Create and label a table showing five possible pairs of solutions to the equation.
 - Create and label a graph of the equation.

[illegible]

- c. Interpret the points $(0,0)$ and $(1,r)$.
5. At the amusement park, Laura paid \$6.00 for a small cotton candy. Her older brother works at the park, and he told her they mark up the cotton candy by 300%. Laura does not think that is mathematically possible. Is it possible, and if so, what is the price of the cotton candy before the markup?
6. A store advertises that customers can take 25% off the original price and then take an extra 10% off. Is this the same as a 35% off discount? Explain.
7. An item that costs \$50.00 is marked 20% off. Sales tax for the item is 8%. What is the final price, including tax?
 - a. Solve the problem with the discount applied before the sales tax.
 - b. Solve the problem with the discount applied after the sales tax.
 - c. Compare your answers in parts (a) and (b). Explain.

8. The sale price for a bicycle is \$315. The original price was first discounted by 50% and then discounted an additional 10%. Find the original price of the bicycle.
9. A ski shop has a markup rate of 50%. Find the selling price of skis that cost the storeowner \$300.
10. A tennis supply store pays a wholesaler \$90 for a tennis racquet and sells it for \$144. What is the markup rate?
11. A shoe store is selling a pair of shoes for \$60 that has been discounted by 25%. What was the original selling price?
12. 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.
13. Write $5\frac{1}{4}\%$ as a simple fraction.
14. Write $\frac{3}{8}$ as a percent.
15. If 20% of the 70 faculty members at John F. Kennedy Middle School are male, what is the number of male faculty members?
16. If a bag contains 400 coins, and $33\frac{1}{2}\%$ are nickels, how many nickels are there? What percent of the coins are not nickels?
17. The temperature outside is 60 degrees Fahrenheit. What would be the temperature if it is increased by 20%?