

# Lesson 6.6:

## Discounts and Markups

### Essential Question

How can you find discounts and selling prices?

## 6.6 Notes

Get out your spiral notebook and calculator too!

## Key Ideas

### Discounts

A **discount** is a decrease in the original price of an item. *% decrease*

### Markups

To make a profit, stores charge more than what they pay. The increase from what the store pays to the selling price is called a **markup**. *% increase*

### Example 1:

The original price of the shorts is \$35. What is the sale price?

*\* Sale price will be < \$35*

*25% of \$35*

*0.25 · 35*

*\$8.75 discount*

*\$35 - \$8.75*

*\$26.25*

*25% off means  
75% "on"*

*(100% - 25% = 75%)*

*75% of \$35*

*0.75 · 35 = \$26.25*



1. The original price of a skateboard is \$50. The sale price includes a 20% discount. What is the sale price?

20% of \$50

$$0.20 \cdot 50$$

\$10

$$\$50 - \$10$$

**\$40**

$$100\% - 20\% = 80\%$$

discount

80% of \$50

$$0.8 \cdot 50$$

**\$40**

### Example 2:

What is the original price of the shoes?

$$100\%x - 40\%x = \$33$$



$$1x - 0.4x = 33$$

$$0.60 \cdot x = 33$$

$$\div 0.6 \quad \div 0.6$$

$$x = \$55$$

Check: 40% off of \$55  
 $0.4 \cdot 55 = 22$   
 $\$55 - \$22 = \$33 \checkmark$

2. The discount on a hoodie is 5%. It is on sale for \$57.

What is the original price of the hoodie?

5% off, 95% "on"

95% of original is \$57

$$\begin{array}{r|l} 0.95 \cdot x = 57 & \\ \hline \div 0.95 & \div 95 \\ \hline x = \$60 & \end{array}$$



Check: 5% off of \$60

$$0.05 \cdot 60 = 3$$

$$\$60 - \$3 = \$57 \checkmark$$

### Example 3:

A store pays \$70 for a bicycle. The percent of markup is 20%. What is the selling price?

20% of \$70

$$0.20 \cdot 70$$

14

$$\$70 + \$14$$

**\$84**

$$100\% + 20\% = 120\%$$

↑  
markup

$$120\% \text{ of } \$70$$

$$1.20 \cdot 70$$

**\$84**

3. The discount on a DVD is 20%. It is on sale for \$10. What is the original price of the DVD?

$$100\% - 20\%$$

$$80\%$$

80% of original is \$10

$$\begin{array}{r} 0.8x = 10 \\ \hline \div 0.8 \quad \div 0.8 \end{array}$$

$$x = 12.5 \Rightarrow \boxed{\$12.50}$$

4. A store pays \$75 for an aquarium. The markup is 20%. What is the selling price?

20% of \$75

$$0.2 \cdot 75 = 15$$

$$\$75 + \$15$$

$$= \boxed{\$90}$$

$$100\% + 20\% = 120\%$$

120% of \$75

$$1.20 \cdot 75$$

$$= \boxed{\$90}$$