Discounts, Markups, Commissions, and Profit

LESSON 3.6

Goal: Find discounts, markups, commissions, and profit.

Vocabulary

Markups: The increase in the wholesale price of an item

Discount: A decrease in the retail price of an item

Commission: An amount paid to a salesperson that is a percent of his or her total sales

Profit: The difference of the income and expenses for a business

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Markups and Discounts

Markups

Retail stores buy items from manufacturers at wholesale prices and then sell the items to customers at retail prices. The retail price is obtained by adding a markup to the wholesale price.

Retail price = Wholesale price + Markup

Discounts

When an item is on sale, the sale price is obtained by subtracting the discount from the original price .

Sale price = Original price − Discount

EXAMPLE 1 **Using a Discount to Find a Sale Price**

Bicycles You are shopping for a bicycle and find one with an original price of $240. The store is offering a 35% discount on all bicycles. What is the sale price of the bicycle?

Solution

1. Find the amount of the discount.

Discount = 35% of $240

= 0.35(240)   Write 35% as a decimal.

= 84   Multiply.

> Remember that the discount must be subtracted from the original price to find the sale price.

2. Subtract the discount from the original price.

240 − 84 = 156

Answer: The sale price of the bicycle is $156 .

EXAMPLE 2 **Using a Markup to Find a Retail Price**

Sneakers A pair of sneakers has a wholesale price of $28. The percent markup is 135%. What is the retail price?

Solution

1. Find the amount of the markup.

Markup = 135% of $28

= 1.35(28)   Write 135% as a decimal.

= 37.8   Multiply.

> Remember that the markup must be added to the wholesale price to find the retail price.

2. Add the markup to the wholesale price.

28 + 37.8 = 65.8

Answer: The retail price of the pair of sneakers is $65.80 .

Guided Practice **Find the sale price or retail price.**

1. Original price: $56 Percent discount: 15%	**2.** Wholesale price: $29 Percent markup: 105%

Commission

When a salesperson is paid a percent of his or her total sales, the amount of pay is called commission .

Commission = Percent commission × Total sales

EXAMPLE 3 Finding a Commission

Sales Your sister works at a shoe store on weekends. She is paid an 8% commission on her sales. This weekend, her sales totaled $1255. Find the commission she earned for her sales this weekend.

Solution

Find the amount of the commission.

Commission = 8 % of $ 1255

= 0.08 (1255)   Write 8% as a decimal.

= 100.40   Multiply.

Answer: Your sister earned $100.40 in commission for her sales this weekend.

Guided Practice Use the information below.

3. Your uncle sells vehicles and is paid a 12% commission on his sales. He sells a truck for $35,000. How much commission does he earn?

Profit

The profit of a business is the difference of the income and expenses for the business.

Profit = Income − Expenses

EXAMPLE 4 **Multiple Choice Practice**

You buy old trading cards at yard sales and auction them on the Internet. So far, you have collected $165 for cards that you have sold. Your expenses for the cards and for shipping are $43. What is your profit?

(A) $122 (B) $143 (C) $165 (D) $208

Solution

| Profit | = | Income | − | Expenses | Write formula for profit.

= | 165 | − | 43 | Substitute.

= | 122 | Subtract.

Answer: Your profit is | $122 |. The correct answer is | A |.

(A) (B) (C) (D)

EXAMPLE 5 **Finding a Profit**

Dance The student council sponsors a dance to raise money to landscape the courtyard. The dance committee spends $52 on decorations, $145 on food, and $100 on music. Tickets cost $3 each, and 186 students attend. Find the profit from the dance.

Solution

Step 1 Income = | 3 |(| 186 |)   Ticket price times number of students

= | 558 | Multiply.

Step 2 Expenses = | 52 | + | 145 | + | 100 | Write the expenses as a sum.

= | 297 | Add.

Step 3 Find the profit by subtracting the | expenses | from the | income |.

Profit = | 558 | − | 297 | = | 261 |

Answer: The profit from the dance is $| 261 |.

Guided Practice Use the information in Example 5.

Homework

4. **What If?** Suppose the ticket price for the dance is $2.50, instead of $3. Find the profit from the dance.