Discount and Markup

Lesson 6-6

Discount and Markup

Discounts

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

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**.

EXAMPLE **1** **Finding a Sale Price**

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

Method 1: First, find the discount. The discount is 25% of $35.

We can use the percent proportion or write an equation to find the discount.

Percent Proportion

$$\frac{x}{35} = \frac{25}{100}$$
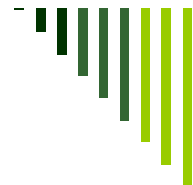
$$100x = 875$$

$$x = 8.75$$

Equation

$$x = 0.25 \bullet 35$$

$$x = 8.75$$

Next, find the sale price.

sale price	=	original price	−	discount
$26.25	=	35	−	8.75

EXAMPLE 1 — Finding a Sale Price

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

Method 2: **A 25% discount is the same as paying 75% of the original price.**

The sale price is 75% of $35.

We can use the percent proportion or write an equation to find the discount.

Percent Proportion

$$\frac{x}{35} = \frac{75}{100}$$

$$100x = 2625$$

$$x = 26.25$$

Equation

$$x = 0.75 \cdot 35$$

$$x = 26.25$$

So, the sale price is $26.25

EXAMPLE 2 Finding an Original Price

40% OFF
NOW $33

What is the original price
of the shoes?

EXAMPLE 2 **Finding an Original Price**

40% OFF
NOW $33

What is the original price
of the shoes?

The sale price is 60% of
the original price.

EXAMPLE **2** **Finding an Original Price**

40% OFF
NOW $33

What is the original price
of the shoes?

The sale price is 60% of
the original price.

Answer this question: 33 is 60% of what number?

40% OFF
NOW $33

What is the original price of the shoes?

The sale price is 60% of the original price.

Answer this question: 33 is 60% of what number?

$$33 = 0.6 \bullet x$$

$$33 = 0.6x$$

$$\frac{33}{0.6} = \frac{0.6x}{0.6}$$

$$55 = x$$

So, the original price was $55

EXAMPLE 3 **Finding a Selling Price**

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

Method 1: Find the markup. The markup is 20% of $70.

$$x = 0.2 \cdot 70$$

$$x = 14$$

Next, find the selling price.

selling price	=	cost to store	+	markup

$$\$84 = 70 + 14$$

EXAMPLE 3   **Finding a Selling Price**

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

Method 2: Find the selling price. The selling price is 120% of the cost to the store, which was $70.

$$x = 1.2 \bullet 70$$

$$x = 84$$

So, the selling price is $84.

2. The discount on a DVD is 50%. It is on sale for $10. What is the original price of the DVD?

$$10 = 0.5x$$
$$20 = x$$

Original Price is $20

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

$$x = 1.2 \cdot 75$$
$$x = 90$$

Selling Price is $90