

6.6 Discounts and MarkUps

EQ: How can you find discounts and selling prices?

Discount: a decrease in the original price.

mark-up: when a store charges you more than what they paid for the item. It is an increase from what the store pays to the selling price.

Example 1: The original price for a pair of shorts is \$35. Find the sale price if they are 25% off.

$$\boxed{\text{sale price}} = \boxed{\text{original price}} - \boxed{\text{discount}}$$

method 1

Find the discount %.

25% of 35

$$\begin{array}{r} X \\ \hline 35 \end{array} = \frac{25}{100}$$

$$X = \$8.75$$

$$\$35 - \$8.75$$

$$\boxed{\$26.25}$$

method 2

Find the sale %.

$$100\% - 25\% = 75\%$$

75% of \$35

$$.75 \cdot 35$$

$$\boxed{\$26.25}$$

Example 2: A pair of shoes are 40% off for a sale price of \$33. What was the original price?

$$100\% - 40\% = 60\%$$

$$\$55 \text{ at } 40\% \text{ off} = 22$$

$$55 - 22 = 33 \quad \checkmark$$

$$\$55 \rightarrow 60\% = 33 \quad \checkmark$$

$$\begin{array}{r} 33 \\ X \\ \hline \end{array} = \frac{60}{100}$$

$$\boxed{X = \$55}$$

Example 3: mark-up

cost to store: \$20

mark-up: 15%

15% of 20

$$.15 \cdot 20$$

$$= \$3$$

$$\$20 + \$3$$

$$= \$23$$

OR

$$\$20 + 15\%$$

$$100\% + 15\%$$

$$\rightarrow 115\% \text{ of } 20$$

$$x = 1.15 \cdot 20$$

$$= \$23$$