6.60 Discounts and Markups

**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.

\[
\text{sale price} = \text{original price} - \text{discount}
\]

- **Method 1**: Find the discount %.
  \[
  \frac{25}{100} \times 35 = \frac{8.75}{35}
  \]
  \[
  x = \$8.75
  \]
  \[
  \$35 - \$8.75 = \$26.25
  \]

- **Method 2**: Find the sale %.
  \[
  100\% - 25\% = 75\%
  \]
  \[
  75\% \times 35 = \$26.25
  \]

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

\[
\frac{55 \times 40}{100} = 22
\]

\[
55 - 22 = 33
\]

\[
\frac{33}{x} = \frac{100}{60}
\]

\[
x = \$55
\]

\[
\$55 \rightarrow 60\% = 33
\]
Example 3: Mark-Up

Cost to store: $20
Mark-up: 15%

15% of 20
0.15 * 20 = $3

$20 + $3 = $23

OR

100% + 15% = 115% of 20
x = 1.15 * 20
x = $23