

6.6 Discounts and Markups p.248

Discount: a decrease in the original price of an item

To find the **SALE PRICE** multiply the cost by the difference of 100% and the percent discount so that you are finding the percent that YOU PAY FOR the item.

Example: A pair of shorts that costs \$35 is on sale for 15% off. What is the sale price?

$$\begin{array}{r} \textcircled{1} \quad 100 \\ \quad -15 \\ \hline \quad 85\% \\ \text{you are} \\ \text{paying} \\ \text{for } 85\% \\ \text{of the item} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad 35 \\ \quad .85 \\ \hline \boxed{\$29.75} \end{array} \rightarrow \text{sale price of the shorts}$$

Markup: an increase in the original price of an item

To find the **SELLING PRICE** multiply the cost by 1 plus the percent (turned into a decimal) so that you are paying for the item PLUS the markup.

Example: A store pays \$70 for a bicycle. The percent of markup is 80%. What is the selling price? $100\% + 80\% = 180\%$

$$\begin{array}{r} 1.80 \\ \times 70 \\ \hline \boxed{\$126} \end{array} \rightarrow \text{selling price of the bicycle}$$

You decide to purchase the bicycle for \$126 when it goes on sale for 10% off. How much does it cost you to buy it with 7.25% tax?

① sale cost

$$100\% - 10\% = 90\%$$

$$126(0.9) =$$

$$\boxed{\$113.40} \text{ sale price}$$

② sales tax

$$100\% + 7.25\% = 107.25\%$$

$$1.0725 \swarrow$$

$$(113.40)(1.0725)$$

$$\boxed{\$121.62} \text{ total w/ discount w/ tax}$$

Profit: the difference between what a store pays for an item and what they sell the item for.

What is the profit to the store for the bicycle you just bought on sale?

[do not include sales tax]

sale price - original price = profit

$$\$113.40 - \$70 = \boxed{\$43.40} \swarrow$$