

Manufacturer → Retailer → consumer

Retail and Wholesale Pricing

Wholesale Price: The price that a retailer pays to buy from a manufacturer.

ex. store, restaurant
← who makes the product.

Retail Price: The price that a retailer sells those items for.

- 1) What is the retail price of a \$7 bracelet with a markup of 150%?

$$\begin{aligned} \text{Retail} &= 7 + (150\% \text{ of } 7) \\ &= 7 + (1.5 \times 7) \\ &= 7 + 10.5 = \$17.50 \end{aligned}$$

$$\begin{array}{r} 7.00 \text{ wholesale} \\ + 10.50 \text{ markup} \\ \hline \$17.50 \text{ Retail} \end{array}$$

- 2) What is the retail price of a \$20 shirt with a markup of 86%?

$$\begin{aligned} \text{Retail} &= 20 + (86\% \text{ of } 20) \\ &= 20 + (.86 \times 20) \\ &= 20 + 17.20 = \$37.20 \end{aligned}$$

$$\begin{array}{r} 20.00 \text{ wholesale} \\ + 17.20 \text{ markup} \\ \hline \$37.20 \text{ Retail} \end{array}$$

- 3) The retail price of a Spiderman action figure is \$50. This is a 90% markup of the retail price. What was the wholesale price?

$$\begin{aligned} \text{Retail} &= \text{wholesale} + \text{markup} \\ 50 &= x + (.90 \text{ of } x) \\ 50 &= x + .9x \\ 50 &= 1.9x \end{aligned}$$

$$\boxed{\$26.32 = x}$$

Discount Pricing

Discount Price: A decrease from the original price of an item to the sale price.

- 1) You buy an iPhone case that is on sale for 15% off the original price of \$25. What is the sale price?

$$\begin{aligned} \text{Sale} &= \$25 - (15\% \text{ of } 25) \\ &= 25 - (.15 \times 25) \\ &= 25 - (3.75) = \$21.25 \end{aligned}$$

$$\begin{array}{r} 25.00 \text{ original} \\ - 3.75 \text{ mark} \downarrow \\ \hline 21.25 \text{ NEW} \\ \text{Sale} \\ \text{price} \end{array}$$

- 2) You buy a computer that is 30% off the original price of \$1150. What is the sale price?

$$\begin{aligned} \text{Sale} &= 1150 - (30\% \text{ of } 1150) \\ &= 1150 - (.3 \times 1150) \\ &= 1150 - (345) \\ &= \$805 \end{aligned}$$

$$\text{Sale} = \text{original} - \text{discount}$$

- 3) Original Price: \$60
Discount Percent: 20%

$$\begin{aligned} \text{Sale} &= \$60 - (20\% \text{ of } 60) \\ &= 60 - (.2 * 60) \\ &= 60 - (12) \\ &= \$48 \end{aligned}$$

Tax and Tip

- 1) The bill is \$22. You leave a 15% tip. The sales tax is 6%. What is the total cost of your meal?

Total bill =
Food + Tax + Tip

$$\begin{aligned} \text{Total} &= \text{Food} + \text{Tax} + \text{Tip} \\ &= 22 + (.06 * 22) + (.15 * 22) \\ &= 22 + (1.32) + (3.30) \\ &= \$26.62 \end{aligned}$$

- 2) The bill is \$34. You leave a 20% tip. The sales tax is 6.5%. What is the total cost of your meal?

$$\begin{aligned} \text{Total} &= \text{Food} + \text{Tax} + \text{Tip} \\ &= 34 + (.065 * 34) + (.2 * 34) \\ &= 34 + (2.21) + (6.80) \\ &= \$43.01 \end{aligned}$$

- 3) Food Bill: \$15
Tax: 5%
Tip: 20%

$$\begin{aligned} \text{Total} &= \text{Food} + \text{Tax} + \text{Tip} \\ &= 15 + (.05 * 15) + (.2 * 15) \\ &= 15 + (.75) + (3.00) \\ &= \$18.75 \end{aligned}$$

Homework: