

Trade Discount, Cash Discount, Markup and Markdown

Definitions:

- **Trade discount** is a reduction of catalogue price (or list price).
- **Cash discount** is offered by businesses to prompt payment.
- **Markup** is the amount added to the cost price of goods to cover overhead (operating expenses) and profit.
- **Markdown** is basically the reduction in the regular selling price.

List of Formulas:

1. Amount of Discount = Rate of Discount x List Price
2. List Price = $\frac{\text{Amount of Discount}}{\text{Rate of Discount}}$
3. Rate of Discount = $\frac{\text{Amount of Discount}}{\text{List Price}}$
4. Net Price = List Price - Amount of Discount
5. Net Price Factor = 100% - %Discount
6. Net Price = Net Price Factor x List Price
3. Selling Price = Cost of Buying + Expenses + Profit
4. Markup = Expenses + Profit
5. Rate of Markup (based on cost) = $\frac{\text{Markup}}{\text{Cost}}$
6. Rate of Markup (based on selling price) = $\frac{\text{Markup}}{\text{Selling Price}}$

EXAMPLE

Integrated Problem:

Molly's Furniture Emporium bought a dining room suite that must be retailed for \$7,000 to cover the cost, overhead expenses of 50% of the cost, and a normal net profit of 30% of the cost. The suite is marked at a list price so that the store can allow a 15% discount and still receive the required regular selling price.

When the suite remained unsold, the store owner decided to mark the suite down for an inventory clearance sale. To arrive at the rate of markdown, the owner decided that the store's profit would have to be no less than 10% of the commission paid to the salesperson. The normal commission (which accounts for 40% of the overhead) was reduced by 33 $\frac{1}{3}$ %.

What is the maximum rate of markdown that can be advertised instead of the usual 15%?

Solution:

Step 1: Find the cost of the dining room suite.

$$\text{Selling Price} = \text{Cost} + \text{Expenses} + \text{Profit}$$

$$S = C + (50\% \times C) + (30\% \times C)$$

$$S = 1C + 0.5C + 0.3C$$

$$7000 = 1.8C$$

$$C = \$3,888.89$$

Step 2: Find the list price of the dining room suite.

$$\text{Regular Selling Price} = \text{List Price} - \text{Discount}$$

$$S = L - (15\% \times L)$$

$$7000 = 1L - 0.15L$$

$$7000 = 0.85L$$

$$\text{Therefore, } L = \$8,235.29$$

Step 3: Find the normal net profit.

$$\text{Normal Net Profit} = 30\% \times \text{Cost}$$

$$= 30\% \times 7000$$

$$= 0.3 \times 7000$$

$$= \$2,100$$

Step 4: Find the required net profit.

$$\text{Required Net Profit} = 10\% \times 2100$$

$$= 0.1 \times 2100$$

$$= \$210$$

Step 5: Find the normal overhead expense.

$$\text{Normal Overhead Expense} = 50\% \times \text{Cost}$$

$$= 0.5 \times 7000$$

$$= \$3,500$$

Step 6: Find the normal commission.

$$\text{Normal Commission} = 40\% \times 3500$$

$$= 0.4 \times 3500$$

$$= \$1,400$$

Step 7: Find the reduced commission.

$$\text{Reduction in commission} = 33\frac{1}{3}\% \times 1400$$

$$= \frac{1}{3} \times 1400$$

$$= \$466.67$$

Step 8: Find the overhead that needs to be recovered.

Overhead to be recovered = $3500 - 466.67 = \$3033.33$

Step 9: Find the inventory clearance price.

$$\begin{aligned}\text{Inventory clearance price} &= \text{Cost} + \text{Overhead} + \text{Profit} \\ &= \$3888.89 + \$3033.33 + \$210 \\ &= \$7132.22\end{aligned}$$

Step 10: Find the markdown based on the inventory clearance price.

$$\begin{aligned}\text{Markdown} &= \text{List Price} - \text{Inventory clearance price} \\ &= \$8235.29 - \$7132.22 \\ &= \$1103.07\end{aligned}$$

Step 11: Find rate of markdown.

$$\begin{aligned}\text{Rate of Markdown} &= \frac{\text{Amount of Markdown}}{\text{List Price}} \\ &= \frac{1103.07}{8235.29} \\ &= 0.134 \times 100 \\ &= 13.4\%\end{aligned}$$

Final Answer: Therefore, instead of the usual 15%, the store can advertise a markdown of 13.4%.