

SOLUTIONS FOR S.3 MATH WORKSHEET SIX

Percentages, Discounts, Commissions,

Interest, Profit and Loss

PART I

EXERCISE

1. At a clearance sale, all goods are on sale at 45% discount. If Jacinta buys a skirt marked Shs.30000, how much would she need to pay?

$$\text{Discount} = \frac{\% \text{ discount} \times \text{M.P}}{100}$$

$$\text{Discount} = \frac{45 \times 30000}{100}$$

$$\text{Discount} = \text{shs. } 13,500$$

$$\text{Selling price} = \text{MP} - \text{Discount}$$

Or

$$\text{Selling price} = 30000 - 13500$$

$$\text{Selling price} = \text{shs}16,500$$

$$\text{S.P} = \text{M.P} \left(\frac{100 - \% \text{ discount}}{100} \right)$$

$$\text{S.P} = 30000 \left(\frac{100 - 45}{100} \right)$$

$$\text{S.P} = \text{shs. } 16,500$$
2. After allowing a discount of 12% on the marked price of an article, it is sold for shs.44000. Find the market price.

$$\text{M.P} = \text{S.P} \left(\frac{100}{100 - \% \text{ discount}} \right)$$

$$\text{M.P} = 44000 \left(\frac{100}{100 - 12} \right)$$

$$\text{M.P} = \text{shs. } 50,000$$
3. Sarah bought a television set at a discount of 12% and sold it at a profit of 25%. If she sold it at shs. 800,000. What was the original price of the television set to the nearest whole number?

$$\text{C.P} = \text{S.P} \left(\frac{100}{100 + \% \text{ Gain/profit}} \right)$$

$$\text{C.P} = 800000 \left(\frac{100}{100 + 25} \right)$$

$$\text{C.P} = \text{shs. } 640,000$$

$$\text{M.P} = \text{S.P} \left(\frac{100}{100 - \% \text{ discount}} \right)$$

$$\text{M.P} = 640000 \left(\frac{100}{100 - 12} \right)$$

$$\text{M.P} = \text{shs. } 727,272$$
4. The marked price of a water cooler is Shs. 17,670,000. The shopkeeper offers an off-season discount of 18% on it. Find its selling price.

$$\text{S.P} = \text{M.P} \left(\frac{100 - \% \text{ discount}}{100} \right)$$

$$\text{S.P} = 17670000 \left(\frac{100 - 18}{100} \right)$$

$$\text{S.P} = \text{shs. } 14,489,400$$
5. A cell phone was marked at 40% above the cost price and a discount of 30% was given on its marked price. Find the gain or loss percent made by the shopkeeper.

Let the C.P be x

$$\text{M.P} = \text{C.P} \left(\frac{100 + \% \text{ Profit}}{100} \right)$$

$$\text{M.P} = x \left(\frac{100 + 40}{100} \right) = 1.4x$$

$$\text{S.P} = \text{M.P} \left(\frac{100 - \% \text{ discount}}{100} \right)$$

$$\text{S.P} = 1.4x \left(\frac{100 - 30}{100} \right)$$

$$\text{S.P} = 0.98x$$

$$\% \text{ loss} = \frac{\text{loss}}{\text{C.P}} \times 100$$

$$\% \text{ loss} = \frac{\text{C.P} - \text{S.P}}{\text{C.P}} \times 100$$

$$\% \text{ loss} = \frac{x - 0.98x}{x} \times 100$$

$$\% \text{ loss} = \frac{0.02x}{x} \times 100$$

$$\% \text{ loss} = 2\%$$
6. The marked price of a television is Shs. 7,300,000. A dealer allows two successive discounts of 20% and 5%. For how much is the television available?

$$\text{S.P} = \text{M.P} \left(\frac{100 - \% \text{ discount}}{100} \right)$$

$$\text{S.P} = 7,300,000 \left(\frac{100 - 20}{100} \right)$$

$$\text{S.P} = \text{shs. } 5,840,000$$

$$\text{S.P} = \text{M.P} \left(\frac{100 - \% \text{ discount}}{100} \right)$$

$$\text{S.P} = 5,840,000 \left(\frac{100 - 5}{100} \right)$$

$$\text{S.P} = \text{shs. } 5,548,000$$
7. Find the rate of discount being given on a shirt whose selling price is shs. 54,600 after deducting a discount of shs. 10400 on its marked price.

$$\text{Percentage discount} = \frac{\text{M.P} - \text{S.P}}{\text{M.P}} \times 100$$

$$\text{Percentage discount} = \frac{10400}{54,600} \times 100$$

$$\text{Percentage discount} = 19.05\%$$

END.