

## GAYAZA HIGH SCHOOL

## S.2 MATH WORKSHEET SEVEN

Percentages, Discounts, Commissions,  
Interest, Profit and Loss

## PART II

**Commission**

A commission is a fee paid to an agent as compensation for executing a transaction. It is calculated either as a percentage of the transaction value or as a flat fee.

**Commission** is paid to an employee or company as an incentive to sell more. A commission is generally a percentage of sales.

A commission may be paid in addition to a salary or in lieu of a salary.  
Base **salary** + (Total amount sold × **Commission** percentage) = Gross **pay**.

A commission is paid to the salesperson for his/her services by the seller with respect to the M.P. For example, if Martha is a salesperson and works in a garment shop and takes 2% commission. It means from shop owner Martha take Shs.2 for selling of Shs.100 (M.P.). In this case, the shop owner is sharing his revenue, thus his profit is reduced.

**Example 1**

Norman earns 6% commission on each baseball uniform he sells. If each uniform cost shs.4500 and he sells 21 uniforms to the baseball team. How much commission will Norman earn?

**Solution:**

Given: Commission rate = 6

$$\begin{aligned} \text{Total income} &= 4500 \times 21 \\ \text{Total income} &= \text{shs. } 94,500 \end{aligned}$$

And commission earned by Norman:

$$\begin{aligned} \text{Commission} &= \frac{\text{Commission rate}}{100} \times \text{Income} \\ \text{Commission} &= \frac{6}{100} \times 94,500 \\ \text{Commission} &= \text{shs. } 56,700 \end{aligned}$$

**Example 2**

A saleslady sold goods worth sh. 750 000. She was paid 2% commission on the sales. How much commission did she get?

Value of goods sold = shs. 750 000

$$\text{Commission paid is} = \frac{2}{100} \times 750000 = \text{shs. } 15\,000$$

**Example 3**

The Ssali family's house was sold for Shs. 300,00,000. How much money will they have after they pay their real estate agent a 5% commission?

$$\begin{aligned} \text{Commission} &= \frac{5}{100} \times 300,000,000 \\ \text{Commission} &= \text{shs. } 15,000,0000 \end{aligned}$$

The Ssali family will have 300,000,000 – 15,000,000 = Shs. 285,000,000 after they pay their real estate agent.

**Example 4**

Paul makes a base monthly salary of Shs. 1,500,000. As a vendor, he must sell Shs. 19,000,000 worth of items per month. He also makes a 6% commission on all sales beyond the monthly quota. If Paul sold Shs. 26,600,000 worth of items this month, what is his total income for the month?

$$\text{Commision} = \frac{6}{100} \times (26,600,000 - 19,000,000)$$

$$\text{Commision} = \text{Shs. } 456,000$$

$$\text{Total income} = \text{Base salary} + (\text{Total amount sold} \times \text{Commission percentage})$$

$$\text{Total income} = 1,500,000 + 456,000$$

$$\text{Total income} = \text{Shs. } 1,956,000$$

### EXERCISE

1. Peter makes Shs. 700,000 a month plus some money by commission rates. He gets 6% of everything he sells. If Peter sold Shs. 5,500,000 worth of items this month, what is his salary for the month?  
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2. Mr. Moya selling second hand shirts earns a commission of 9% of the total sales. Each shirt costs shs. 7,500. Find the number of shirts sold if Mr. Moya earned a commission of shs. 297,000.  
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3. James makes a base monthly salary of Shs. 150,000. As a vendor, he must sell Shs. 2,000,000 worth of items per month. He also makes a 4% commission on all sales beyond the monthly quota. If Paul sold Shs. 2,600,000 worth of items this month, what is his total income for the month?  
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4. Jose makes a base monthly salary of Shs. 270,000. As a vendor, he must sell Shs. 3,000,000 worth of items per month. He also makes a 10% commission on all sales beyond the monthly quota. There is also an additional 10% bonus on top of the normal commission rate for any sales beyond Shs. 3,900,000. If Jose sold Shs. 4,200,000 worth of items this month, what is his total income for the month?  
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5. Steven makes a base monthly salary of Shs. 270000. As a vendor, he must sell Shs. 1,700,000 worth of items per month. He also makes a 10% commission on all sales beyond the monthly quota. There is also an additional 5% bonus on top of the normal commission rate for any sales beyond Shs. 2,500,000. If Steven made Shs. 480,000 this month, how much did he sell.

6. A saleswoman earns a basic salary of shs. 120,000 and a commission of 8% of the month's total sales. If the month's total sales were shs. 1,350,000, find her income for the month.

7. A hawker sells handkerchiefs at shs. 500 each. He sold 50 handkerchiefs in the first week. In the second week he sold 20% more than in the first week. In the third week he sold 10% more than in the second week. Each week he receives a commission of 8% on the price of the first 20 handkerchiefs sold and 12% for any handkerchiefs sold in excess of 20.

(a) Express the number of handkerchiefs sold in the third week as a percentage of the number sold in the first week.

(b) Calculate the commission he received in the third week.

(c) If in the fourth week the hawker received a commission of shs. 2,000. Calculate the number of handkerchiefs he sold in that week.

**END.**