

MATHEMATICS NOTES FOR 7<sup>TH</sup> CLASS (FOR ISLAMABAD)

Chapter 04

**FINANCIAL  
ARITHMETIC**

**Exercise 4.1**

1. Find the profit or loss percentage in the following cases:

- (i) C.P. = Rs. 50, S.P. = Rs. 70
- (ii) C.P. = Rs. 1540, S.P. = Rs. 1386
- (iii) C.P. = Rs. 125, Profit = Rs. 20
- (iv) C.P. = Rs. 12.5, Loss = Rs. 2.5

Ans. Find the profit or loss percentage

(i) C.P. = Rs. 50

S.P. = Rs. 70

Profit = 70 - 50 = 20

Profit percent =  $\frac{\text{Profit} \times 100}{\text{C.P.}}$

$$= \frac{20 \times 100}{50} = 20 \times 2 = 40\%$$

(ii) C.P. = Rs. 1540

S.P. = Rs. 1386

Loss = 1540 - 1386 = 154

Loss Percent =  $\frac{\text{Loss} \times 100}{\text{C.P.}}$

$$= \frac{154 \times 100}{1540} = \frac{1540 \times 1}{1540} = 10\%$$

(iii) C.P. = 125

Profit = 20

Profit percent =  $\frac{\text{Profit} \times 100}{\text{C.P.}}$

$$= \frac{20 \times 100}{125} = \frac{20 \times 4}{5} = 4 \times 4 = 16\%$$

(iv) C.P. = Rs. 12.5

Loss = 2.5

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

$$= \frac{2.5 \times 100}{12.5} = \frac{25^5 \times 100^4}{125} = 20\%$$

2. A bag costing Rs. 50 is sold for Rs. 45. Find profit or loss percent.

Ans. C.P. = Rs. 50

S.P. = Rs. 45

Loss = 50 - 45 = Rs. 5

Loss percent =  $\frac{\text{Loss} \times 100}{\text{C.P.}}$

$$= \frac{5 \times 100}{50} = 10\%$$

3. Sonia bought a computer for Rs. 15000 and sold it for Rs. 15900. Find profit or loss percent.

Ans. C.P. = Rs. 15000

S.P. = Rs. 15900

Profit = 15900 - 15000 = 900

Profit percent =  $\frac{\text{Profit} \times 100}{\text{C.P.}}$

$$= \frac{900 \times 100}{15000} = \frac{900 \times 100}{15000}$$

$$= \frac{90}{15} = 6\%$$

4. There was a loss of Rs. 150 when an item was sold for Rs. 2350. Find C.P. and loss percent.

Ans. S.P. = Rs. 2350

Loss = Rs. 150

C.P. = 2350 + 150 = Rs. 2500

Loss Percentage =  $\frac{\text{Loss} \times 100}{\text{C.P.}}$

$$= \frac{150 \times 100}{2500} = \frac{150 \times 100}{2500}$$

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$$= \frac{150}{25} = \frac{6}{1} = 6\%$$

5. *Farooq bought some wedding cards for Rs. 500. He sold them for Rs. 480. Find profit or loss percent.*

**Ans.** C.P. = Rs. 500

S.P. = Rs. 480

$$\text{Loss} = 500 - 480 = 20$$

$$\text{Loss percent} = \frac{\text{Loss} \times 100}{\text{C.P.}}$$

$$= \frac{20 \times 100}{500} = \frac{200 \times 100}{5000} = 4\%$$

6. *Hassan sold a fan for Rs. 2500 and had a loss of Rs. 500. Find C.P. and loss percent.*

**Ans.** S.P. = 2500

Loss = 500

C.P. = 3000

$$\text{Loss percent} = \frac{\text{Loss} \times 100}{\text{C.P.}}$$

$$= \frac{500 \times 100}{3000} = \frac{500 \times 100}{30000} = 16.67\%$$

7. *Nawaz father bought two plots for Rs. 125000. He sold them for Rs. 150000. Find profit percent.*

**Ans.** C.P. = Rs. 125000

S.P. = Rs. 150000

$$\begin{aligned} \text{Profit} &= 150000 - 125000 \\ &= \text{Rs. } 25000 \end{aligned}$$

$$\text{Profit percent} = \frac{\text{Profit} \times 100}{\text{C.P.}}$$

$$= \frac{25000 \times 100}{125000}$$

$$= \frac{25000 \times 100}{125000} = 20\%$$

8. *Kanwal bought an iron for Rs. 1000 and got a profit of Rs. 200. Find profit percent and sale price.*

**Ans.** C.P. = 1000

Profit = 200

$$\text{S.P.} = 1000 + 200 = \text{Rs. } 1200$$

$$\text{Profit percent} = \frac{\text{Profit} \times 100}{\text{C.P.}}$$

$$= \frac{200 \times 100}{1000} = \frac{200 \times 100}{10000} = 20\%$$

9. *Which profit is better?*

(i) C.P. = Rs. 20, S.P. = Rs. 23

(ii) C.P. = Rs. 25, S.P. = Rs. 28

**Ans.** (i) C.P. = 20

S.P. = 23

$$\text{Profit} = 23 - 20 = \text{Rs. } 3$$

$$\text{Profit percent} = \frac{3 \times 100}{20} = 15\%$$

(ii) C.P. = 25

S.P. = 28

$$\text{Profit} = 28 - 25 = \text{Rs. } 3$$

$$\text{Profit percent} = \frac{\text{Profit} \times 100}{\text{C.P.}}$$

$$= \frac{3 \times 100}{25} = 3 \times 4 = 12\%$$

In transaction I profit is 15%

In transaction II profit is 12%

So transaction I better profit.

10. *Find sale price if:*

(i) C.P. = Rs. 500, Profit = 5%

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(ii) C.P. = Rs. 300, Loss = 10%

Ans. (i)

$$C.P. = Rs. 500$$

$$\text{Profit} = 5\% = \frac{5 \times 500}{100} = 5 \times 5 = Rs. 25$$

$$\begin{aligned} S.P. &= C.P. + \text{Profit} \\ &= 500 + 25 = Rs. 525 \end{aligned}$$

(ii) C.P. = 300

$$\text{Loss} = 10\% = \frac{10 \times 300}{100} = Rs. 30$$

$$S.P. = C.P. - \text{Loss} = 300 - 30 = Rs. 270$$

11. A motorcycle was bought for Rs. 48000 and was sold at a profit of 6%. Find its sale price.

Ans. C.P. = Rs. 48000

$$\begin{aligned} \text{Profit} &= 6\% \\ &= \frac{6 \times 48000}{100} = 6 \times 4800 \\ &= 2880 \end{aligned}$$

$$S.P. = 48000 + 2880 = Rs. 50880$$

**Exercise 4.2**

1. Complete the following:

| S.No. | M.P.    | S.P.    | Discount | Discount % |
|-------|---------|---------|----------|------------|
| (i)   | Rs. 80  | Rs. 70  |          |            |
| (ii)  | Rs. 100 |         | Rs. 20   |            |
| (iii) | Rs. 400 |         |          | 25%        |
| (iv)  |         | Rs. 180 | Rs. 20   |            |

Ans. (i) M.P. = Rs. 80

$$S.P. = Rs. 70$$

$$\text{Discount} = 80 - 70 = Rs. 10$$

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

$$= \frac{10 \times 100}{80} = \frac{100}{8} = \frac{50}{4} = \frac{25}{2} = 12.5\%$$

(ii) M.P. = Rs. 100

$$\text{Discount} = Rs. 20$$

$$S.P. = 100 - 20 = Rs. 80$$

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

$$= \frac{20 \times 100}{100} = 20\%$$

(iii) M.P. = Rs. 400

$$\text{Discount} = Rs. 25\% = \frac{25 \times 400}{100} = Rs. 100$$

$$\begin{aligned} S.P. &= M.P. - \text{Discount} \\ &= 400 - 100 = Rs. 300 \end{aligned}$$

(iv) S.P. = 180

$$\text{Discount} = Rs. 20$$

$$M.P. = 180 + 20 = 200$$

$$\text{Discount \%} = \frac{20 \times 100}{200} = 10\%$$

2. Which is better discount?

(i) Discount of Rs. 12 on M.P. of Rs. 100.

(ii) Discount of Rs. 110 on M.P. of Rs. 1000.

Ans. (i) M.P. = 100

$$\text{Discount} = Rs. 12$$

$$\text{Discount \%} = \frac{12 \times 100}{100} = 12\%$$

(ii) M.P. = 1000

$$\text{Discount} = Rs. 110$$

$$\text{Discount \%} = \frac{110 \times 100}{1000}$$

$$= \frac{110 \times 100}{1000} = 11\%$$

Discount in part one (12%) is better than part two (11%).

3. The marked price of a fan is Rs. 1400. Find its sale price if discount is 10%.

Ans. Marked price = 1400

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$$\text{Discount} = 10\% = \frac{1400 \times 10}{100}$$

$$= \text{Rs. } 140$$

$$\text{S.P.} = 1400 - 140 = \text{Rs. } 1260$$

4. The marked price of an item is Rs. 320. It is sold for Rs. 300. Find discount percent.

Ans. M.P. = Rs. 320

G.S.P. = Rs. 300

$$\text{Discount} = 320 - 300 = 20$$

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

$$= \frac{20 \times 100}{320} = \frac{20 \times 100^{25}}{320}$$

$$= \frac{25}{4} = 6.25\%$$

5. A bicycle is sold for Rs. 3500 having marked price Rs. 3600. Find discount percent.

Ans. S.P. = Rs. 3500

M.P. = Rs. 3600

$$\text{Discount} = 3600 - 3500 = \text{Rs. } 100$$

$$\text{Discount \%} = \frac{100 \times 100}{3600}$$

$$= \frac{100 \times 100}{3600} = \frac{100}{36} = \frac{25}{9} = 2.78\%$$

6. An item is sold for Rs. 1800 at a discount of Rs. 200. Find its marked price and discount percent.

Ans. S.P. = Rs. 1800

Discount = Rs. 200

$$\text{M.P.} = 1800 + 200 = 2000$$

$$\text{Discount \%} = \frac{200 \times 100}{2000} = 10\%$$

7. Find marked price of a bag at a discount of 12% having sale price Rs. 132.

Ans. Marked price = M.P. = ?

Discount = 12%

S.P. = 132

S.P. : Marked price

$$88 : 100$$

$$132 : x$$

$$x : 100 :: 132 : 88$$

$$88x = 100 \times 132$$

$$x = \frac{100 \times 132}{88}$$

$$x = \frac{100 \times 132}{88} = \frac{25 \times 12}{2} = 150$$

$$x = \text{Rs. } 150$$

8. A shopkeeper sells an article having marked price Rs. 160. Find its sale price if the discount is

(i) 8%

(ii) 10%

Ans. (i) M.P. = 160

$$\text{Discount} = 8\% = \frac{8 \times 160}{100}$$

$$= \frac{8 \times 16}{10} = \frac{128}{10} = 12.80$$

$$\text{S.P.} = 160 - 12.80 = \text{Rs. } 147.20$$

(ii) M.P. = 160

$$\text{Discount} = 10\% = \frac{10 \times 160}{100} = 16$$

$$\text{S.P.} = 160 - 16 = \text{Rs. } 144$$

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9. A toy car is sold for Rs. 4600 at the discount of 8%. What is marked price of toy car?

Ans. S.P. = Rs. 4600

Discount = 8%

M.P. = ?

M.P. : S.P.

$$\begin{array}{ccc} 100 & : & 92 \\ \uparrow & & \uparrow \\ x & : & 4600 \end{array}$$

$$x : 100 :: 4600 : 92$$

$$92x = 100 \times 4600$$

$$x = \frac{100 \times 4600}{92} = \frac{100^{25} \times 4600^{200}}{92}$$

$\frac{100}{92}$

$$x = \text{Rs. } 5000$$

10. A shopkeeper offers a discount of 20% on the cell phone. Find the marked price of cell phone if its sale price is Rs. 7200.

Ans. S.P. = 7200

Discount = 20%

M.P. = ?

Marked Price : S.P.

$$\begin{array}{ccc} 100 & : & 80 \\ \uparrow & & \uparrow \\ x & : & 7200 \end{array}$$

$$x : 100 :: 7200 : 80$$

$$\frac{80x}{80} = \frac{100 \times 7200}{80}$$

$$x = \frac{100 \times 7200}{80} = \text{Rs. } 9000$$

Exercise 4.3

1. Find the property tax @ 3% on a shop worth Rs. 475000. Also find the net amount including property tax.

Ans. Worth = Rs. 475000

Rate of property tax = 3%

$$\text{Property tax} = \frac{3 \times 475000}{100}$$

$$= 3 \times 4750 = \text{Rs. } 14250$$

Net amount including property tax = ?

$$= 475000 + 14250$$

$$= \text{Rs. } 489250$$

2. Value of a shopping centre is Rs. 5600000. Find the property tax paid by the owner @ 3.5% if there is a rebate of Rs. 50000 in tax for maintenance.

Ans. Worth = Rs. 5600000

Rate of property tax = 3.5%

$$= \frac{3.5 \times 5600000}{100}$$

$$= 35 \times 5600$$

$$= \text{Rs. } 196000$$

Rebate = Rs. 50,000

$$\begin{aligned} \text{Payable property tax} &= 196000 - 50000 \\ &= \text{Rs. } 146000 \end{aligned}$$

3. Ammara paid property tax Rs. 35000 @ 2.5% for a house. Calculate the value of the property.

Ans. Property tax paid = Rs. 35000

Property tax rate = 2.5%

Worth = x

$$\frac{x \times 2.5}{100} = 35000$$

$$\frac{1000}{25} \times \frac{25}{1000} x = \frac{35000 \times 1000^{40}}{25}$$

$$x = 1400000$$

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4. Tariq paid property tax Rs. 10800 for a property worth Rs. 180000. What is the rate of property tax?

Ans. Worth = 180,000  
 Property tax paid = Rs. 10800  
 Rate of property tax = x  
 $\frac{x}{100} \times 180000 = 10800$   
 $1800x = 10800$   
 $x = \frac{10800}{1800} = 6\%$

5. Factory price of a bicycle is Rs. 10000. Calculate general sales tax @ 16% and sales price of bicycle.

Ans. Factory price = Rs. 10000  
 GST Rate = 16%  
 $GST = \frac{16 \times 10000}{100}$   
 $= 16 \times 100 = \text{Rs. } 1600$   
 Price with GST = Rs. 10000 + 1600  
 $= \text{Rs. } 11600$

6. The sale price of a table is Rs. 9360 including sales tax @ 17%. Find the original price of table.

Ans. Original price = x  
 $GST = 17\% = \frac{17}{100}x$   
 Sale price = 9360  
 $x + \frac{17}{100}x = 9360$   
 $\frac{100}{117} \times \frac{117}{100}x = \frac{9360 \times 100}{117}$   
 $x = \text{Rs. } 8000$

7. Rustam runs 5 shopping centres worth Rs. 50000000. Last month he paid a property tax of Rs. 1000000 in total.

(i) Find the rate of property tax.

- (ii) Find the property tax of each shopping centre at the same rate.

Ans. (i) Worth Rs. 50000000  
 Property tax = Rs. 10,00000  
 Rate of property tax = x  
 $\frac{5000000}{100} \times x = 1000000$   
 $x = \frac{1000000}{500000} = 2\%$

- (ii) Property tax of each shopping centre = ?  
 $= \frac{1000000}{5} = \text{Rs. } 200000$

8. General sales tax @ 17% written on an electricity bill is Rs. 170. Calculate the total electricity bill.

Ans. GST Rate = 17%  
 GST Amount = Rs. 170  
 Electricity bill = x  
 $\frac{x \times 17}{100} = 170$   
 $\frac{100}{17} \times \frac{17}{100} \times x = \frac{170 \times 100}{17}$   
 $x = 10 \times 100 = \text{Rs. } 1000$   
 Total electricity bill = Price + GST  
 $= 1000 + 170$   
 $= \text{RS. } 1170$

9. Original (factory) price of a motor car is Rs. 800000. Amount of GST is Rs. 95000. Find the rate of GST.

Ans. Factory price = Rs. 800000  
 GST amount = Rs. 95000  
 Rate of GST = x  
 $\frac{x}{100} \times 800000 = 95000$

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$$\frac{8000}{8000} \times \frac{95000}{8000} = 11.875\%$$

$$x = 11.875\%$$

10. Asma bought the following items from a super store:

(i) 10 litres cooking oil @ Rs. 250 per litre.

(ii) 5 kg sugar @ Rs. 80 per kg.

(iii) 2 bottles of tomato ketchup @ Rs. 120 per bottle.

Calculate GST @ 17% on each item paid by her. Also find net GST paid by her.

Ans. (i) Cost of cooking oil =  $10 \times 250$   
= Rs. 2500

Cost of sugar =  $80 \times 5$  = Rs. 400

Cost of tomato ketchup =  $120 \times 2$   
= Rs. 240

Total cost = 3140

GST Rate = 17%

GST Paid =  $\frac{17 \times 3140}{100}$   
= 533.80

(i) GST on cooking oil =  $\frac{2500 \times 17}{100}$   
= Rs. 425

(ii) GST on sugar =  $\frac{400 \times 17}{100}$  = Rs. 68

(iii) GST on ketchup =  $\frac{240 \times 17}{100}$   
= Rs. 40.80

**Exercise 4.4**

1. A publisher gives a commission of 20% on books. Find commission if a book seller buys books having sum of written price as Rs. 2350.

Ans. Written price = Rs. 2350

Commission =  $20\% = \frac{20}{100} \times 2350$   
= Rs. 470

2. A factory gives 12% commission on the written price of an article to a broker. Find amount paid by the broker to the factory if written price of article is Rs. 4900.

Ans. Written price = Rs. 4900

Commission =  $12\% = \frac{12}{100} \times 4900$   
=  $49 \times 12$  = Rs. 588

Amount paid =  $4900 - 588$   
= Rs. 4312

3. A manufacturer gives 10% commission on his product and an additional commission of 5% on balance on cash payment. Find the commission of the shopkeeper if price of product is Rs. 26780. What does shopkeeper pay?

Ans. Price = 26780

Commission =  $10\% = \frac{26780 \times 100}{100}$   
= Rs. 2678.

Balance amount =  $26780 - 2678$   
= Rs. 24102

Additional commission = 5%

=  $\frac{5 \times 24102}{100}$

= Rs. 1205.10

Amount paid to the manufacture  
=  $24102 - 1205.10$   
= Rs. 22896.9

4. A factory owner allows 12% commission at the sale of Rs. 12000 and an additional

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*commission of 15% beyond the sale of Rs. 12000. An agent sold articles for Rs. 27000. Find commission of agent.*

**Ans.** Price of article = Rs. 27000

Amount of commission on 12000 = 12%

$$= \frac{12000 \times 12}{100} = 120 \times 12 = 1440$$

Additional commission = 15%

on excess sales

$$= \frac{15}{100} (27000 - 12000)$$

$$= \frac{15 \times 15000}{100}$$

$$= 15 \times 150 = \text{Rs. } 2250$$

$$\text{Total commission} = 1440 + 2250 \\ = \text{Rs. } 3690$$

5. *An agent sold goods for Rs. 50000 and got a commission of Rs. 3000. Find the percentage of commission of agent.*

**Ans.** Sale price = 50000

Commission = Rs. 3000

Percentage of commission = ?

$$\frac{50000 \times x}{100} = 3000$$

$$500x = 3000$$

Percentage of commission = ?

$$\frac{50000 \times x}{100} = 3000$$

$$500x = 3000$$

$$x = \frac{3000}{500} = 6\%$$

6. *A property dealer sold a house for Rs. 2550000 and charged a commission of 2% from both parties. What did the dealer and*

*seller get? What did the buyer pay?*

**Ans.** S.P. = 2550000

Commission = 2%

$$= \frac{2 \times 2550000}{100}$$

$$= 2 \times 25500 = 51000$$

The buyer paid = 255000 + 51000

$$= 2601000$$

Seller got = 2550000 - 51000

$$= 2499000$$

7. *A manufacturer sold an article to a wholesaler for Rs. 500 who again sold it for Rs. 750. If the rate of sales tax on the goods is 10% then find the VAT paid by the wholesaler.*

**Ans.** Whole seller's sale price = 750

Whole seller's cost price = 500

$$\text{Profit} = 750 - 500 = 250$$

$$\text{VAT paid by whole seller} = \frac{250 \times 10}{100}$$

$$= \text{Rs. } 25$$

8. *A shopkeeper buys an article from the wholesaler at Rs. 450 and pays sales tax at the rate of 10%. The shopkeeper fixes the price of the article at Rs. 600 and charges sales tax at 10% from the consumer.*

(a) *Find the input tax and output tax for the shopkeeper.*

(b) *Find the VAT that the shopkeeper pays to the government.*

**Ans.** Shopkeeper buys from whole seller

$$= \text{Rs. } 450$$

$$\text{Shopkeeper sells} = \text{Rs. } 600$$

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$$(a) \text{ Input tax} = 450 \times 10\% = \frac{450 \times 10}{100}$$

$$= \text{Rs. } 45$$

$$\text{Output tax } 600 \times 10\% = \frac{600 \times 10}{100}$$

$$= \text{Rs. } 60$$

$$\text{VAT} = \text{Output tax} - \text{input tax}$$

$$= 60 - 45 = \text{Rs. } 15$$

9. A shopkeeper buys some medicine for Rs. 550 and pays sales tax at the rate of 4%. He sells the medicine for Rs. 800 and charges sales tax from the buyer at the rate of 5%.

(a) Find the input tax and output tax for the shopkeeper.

(b) Find the VAT payable by the shopkeeper.

Ans. C.P. = 550

$$\text{Input tax } 4\% = \frac{4 \times 550}{100} = \text{Rs. } 22$$

$$\text{Output tax } 5\% = \frac{800 \times 5}{100} = \text{Rs. } 40$$

$$\text{VAT} = 40 - 22 = \text{Rs. } 18$$

10. A retailer charges sales tax on an article at the rate of 6% from the buyer. The listed price of the article is Rs. 450. If the retailer has to pay a VAT of Rs. 9, what was the sum the retailer paid to the wholesaler?

Ans. Price = 450

$$\text{Sales tax} = 6\% = \frac{6 \times 450}{100} = \text{Rs. } 27$$

$$\text{VAT} = x - 27 = 9$$

$$x = 27 + 9 = 36$$

$$\text{Retailer paid to whole seller} = ?$$

$$x \times \frac{6}{100} = 36$$

$$\frac{100}{6} \times \frac{6}{100} x = \frac{36 \times 100}{6}$$

$$x = \text{Rs. } 600$$

11. A man buys an article whose listed price is Rs. 1080 from a shopkeeper and pays a sales tax at the rate of 10%. The shopkeeper pays a VAT of Rs. 12. Find the input tax and the price inclusive of tax at which the shopkeeper bought the article.

Ans. Listed price = Rs. 1080

$$\text{Sales tax} = 10\% = \frac{10 \times 1080}{100}$$

$$= \text{Rs. } 108$$

$$\text{VAT} = x - 108 = 12$$

$$\text{Output tax } x = 108 + 12 = 120$$

$$\text{The customer bought article} = 1080 + 120 = \text{Rs. } 1200$$

## Exercise 4.5

1. Find Zakat on the following:

- 8 tola gold @ Rs. 80000 per tola
- 70 tola silver @ Rs. 800 per tola
- 100g gold @ Rs. 8000 per gram
- 712g silver @ Rs. 80 per gram

Ans. Find Zakat on the following:

$$(i) \text{ Cost of gold} = 8 \times 80,000 = 640000$$

$$\text{Ratio of Zakat} = 2\frac{1}{2}\%$$

$$\text{Zakat paid} = \frac{2.5}{100} \times 640000$$



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$$= 25 \times 528 = \text{Rs. } 13200$$

6. Find Ushr separately on the following crops when the land is irrigated by rain water: 1000kg rice, 80kg fruit, 140kg vegetables.

**Ans.** Usher rate = 10%

- (i) Rice 1000 kg

$$\text{Usher} = \frac{1000 \times 10}{100} = 100\text{kg}$$

- (ii) Fruit = 80kg

$$\text{Usher} = \frac{80 \times 10}{100} = 8\text{kg}$$

- (iii) Vegetables = 140kg

$$\text{Usher} = \frac{140 \times 10}{100} = 14\text{kg}$$

7. A person gives Ushr Rs. 3750 on crop worth Rs. 75000. What is rate of Ushr given? Is the land irrigated by artificial resources?

**Ans.** Ushr paid = Rs. 3750

Worth = Rs. 75000

Ushr rate = x

$$\frac{x}{100} \times 75000 = 3750$$

$$750x = 3750$$

$$x = \frac{3750}{750} = 5\%$$

Yes: Ushr rate is 5% for land irrigated by artificial resources.

8. Aamir has a poultry farm. At the end of lunar year, he paid Zakat Rs. 8250. Find number of hens in the poultry farm provided that each hen is sold for Rs. 330.

**Ans.** Zakat paid = Rs. 8250

Cost of hens = @ Rs. 330 each

Amount = x

$$x \times 2.5 = 8250$$

$$\frac{1000}{25} \times \frac{25}{1000} \times x = \frac{8250 \times 1000}{25}$$

$$x = 330000$$

$$\text{No. of hens} = \frac{330000}{330} = 1000 \text{ hens}$$

9. A land is irrigated by a river. Find value of cotton produced if Ushr given is Rs. 9786.5.

**Ans.** Ushr paid = Rs. 9786.50

Ushr rate = 10

Amount (value) = x

$$\frac{x \times 10}{100} = 9786.50$$

$$x = \text{Rs. } 97865$$

**Exercise 4.6**

1. Abid works in a bank whose annual income from salary is Rs. 500000. Find his income tax @ 5% if the tax rebate is Rs. 400000.

**Ans.** Annual income from salary

$$= \text{Rs. } 500000$$

Tax rebate = 400000

Taxable income = 100000

Income tax rate = 5%

$$\text{Income tax} = \frac{5 \times 100000}{100}$$

$$= 5 \times 1000 = \text{Rs. } 5000$$

2. Ms. Haleema has the following information for the tax year:

Salary = Rs. 34400 per month

Income from business = Rs. 22000 per Month

Calculate her income tax @ 5%. The rebate on the tax is Rs. 500000.

**Ans.** Salary = 34400 per month

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Income from business  
 = Rs. 22000 per month  
 Annual income from salary =  $34400 \times 12$   
 = 412800  
 Annual income from business =  $22000 \times 12$   
 = 264000  
 Total annual income = 676800  
 Rebate on the tax = 500000  
 Taxable income = 176800  
 Income tax rate = 5%  
 Income tax amount =  $\frac{5 \times 176800}{100}$   
 =  $5 \times 1768$   
 = 8840

3. *Mr. Iftikhar is a professor in a government college. Compute income tax paid by him @ 6% if his monthly income is Rs. 120000. The reduction in the tax is 25% being teacher and the rebate on the tax is Rs. 600000.*

*Ans.* Monthly income = 120000  
 Annual income =  $120,000 \times 12$   
 = 1440000  
 Rebate on the tax = 600000  
 Taxable income = 840000  
 Income tax @ 6% =  $\frac{6 \times 840000}{100}$   
 =  $6 \times 8600$   
 = 50400  
 Reduction in the tax = 25%  
 =  $\frac{25 \times 50400}{100}$   
 =  $25 \times 504$   
 = 12600  
 Amount of tax =  $50400 - 12600$

= Rs. 37800

4. *Mr. Manzoor Qadir provided the following information for the tax year:*

*Salary income = Rs. 232000*

*Rent from house = Rs. 104400*

*Income from agriculture = Rs. 36000*

*Calculate his income tax if the rebate on the tax is Rs. 200000 and rate of tax is 5%.*

*Ans.* Salary income = 232000  
 Rent for house = 104400  
 Income from agriculture = 36000  
 Total income = 372400  
 Rebate = 200000

Taxable income = 172400

Income tax @ 5% =  $\frac{5 \times 172400}{100}$   
 =  $5 \times 1724$   
 = Rs. 8620

5. *Mr. Asif is a doctor and runs his private clinic. His payment account for the tax year is:*

*Consultation fees = Rs. 862000*

*Gifts from patients = Rs. 42000*

*Calculate his income tax Rate of tax is 4% and rebate on the tax is Rs. 400000.*

*Ans.* Consultation fees = 862000  
 Gifts from patients = 42000  
 Total income = 904000  
 Rebate = 400000

Taxable income = 504000

Income @ 5% =  $\frac{5 \times 504000}{100}$

**MATHEMATICS NOTES FOR 7<sup>TH</sup> CLASS (FOR ISLAMABAD)**

$$= 5040 \times 5 = 25200.$$

6. The following information is available in respect of Mr. Ahmed Khan for the current tax year:

Salary income = Rs. 240000

Business income = Rs. 290000

Calculate tax @ 10%. The rebate on the tax is Rs. 200000.

**Ans.**

Mr. Ahmed Khan's salary income = 240000

Business income = 290000

Total income = 530000

Rebate = 200000

Taxable income = 330000

$$\begin{aligned} \text{Income tax @ 10\%} &= \frac{330000 \times 10}{100} \\ &= \text{Rs. 33000} \end{aligned}$$

7. Ayesha is executive engineer. She provided the following information for the tax year:

(i) Income:

Salary income = Rs. 840000

Income from other sources = Rs. 160000

(ii) Donation:

Prime minister relief fund = Rs. 50000

Zakat = Rs. 42000

Calculate income tax @ 8%. The rebate on the tax is Rs. 400000.

**Ans.** Salary income = 840000

Other sources = 160000

Total income = 1000000

Zakat = 42000

Net income = 958000

Rebate = 400000

558000

Prime Minister relief fund = 50000

Taxable income = 508000

$$\begin{aligned} \text{Income tax @ 8\%} &= \frac{8 \times 50800}{100} \\ &= 8 \times 508 \\ &= \text{Rs. 40640} \end{aligned}$$

8. Younas provided tax @ 8%. The rebate on the tax is Rs. 400000.

(i) Income:

Salary income = Rs. 900000

Royalty = Rs. 340000

(ii) Donations:

Welfare fund = Rs. 60000

Charitable trust = Rs. 35000

Compute income tax @ 10%. The rebate on the tax is Rs. 600000.

**Ans.** Salary income = 900000

Royalty = 340000

Total = 1240000

Donations

60000 + 35000 = 95000

Net income = 1240000

- 95000

1145000

Rebate = 600000

Taxable income = 545000

$$\begin{aligned} \text{Income tax @ 10\%} &= \frac{10 \times 545000}{100} \\ &= \text{Rs. 54500} \end{aligned}$$

**Review Exercise 4**

1. Choose the correct option in the following:

(i) General sales tax is paid by:

- (a) salesman      ✓ (b) buyer  
(c) importer      (d) exporter

**MATHEMATICS NOTES FOR 7<sup>TH</sup> CLASS (FOR ISLAMABAD)**

(ii) **General sales tax is a:**

- (a) direct tax      ✓(b) indirect tax  
(c) wealth tax      (d) penalty

(iii) **Rate of sales tax on most of the goods in Pakistan is:**

- (a) 10%      (b) 15%  
✓(c) 17%      (d) 25%

(iv) **GST on the milk powder worth Rs. 500 @ 17% is:**

- ✓(a) Rs. 85      (b) Rs. 75  
(c) Rs. 78      (d) Rs. 100

(v) **Output tax – input tax =**

- (a) property tax      (b) GST  
(c) income tax      ✓(d) VAT

(vi) **Commission on amount Rs. 500000 @ 2% is:**

- ✓(a) Rs. 10000      (b) Rs. 20000  
(c) Rs. 5000      (d) Rs. 1000

(vii) **Zakat on Rs.  $x$  is:**

- (a)  $\frac{1}{2.50}x$       (b)  $\frac{5}{2}x$   
✓(c)  $\frac{1}{40}x$       (d)  $\frac{1}{20}x$

(viii) **Zakat is due after completion of one:**

- (a) financial year      ✓(b) lunar year  
(c) solar year      (d) tax year

(ix) **Ushr means:**

- ✓(a) 10%      (b) 5%  
(c)  $\frac{1}{10}\%$       (d)  $\frac{1}{5}\%$

(x) **According to some scholars, the nisab of ushr for grain is:**

- (a) 650kg      (b) 450kg  
(c) 500kg      ✓(d) 600kg

(xi) **Ushr is paid at the time of:**

- (a) Eid-ul-Fitr      ✓(b) harvest

(c) cultivation      (d) first Ramadan

(xii) **Value added tax is imposed on:**

- (a) goods      (b) services  
(c) salary      ✓(d) both a & b

(xiii) **Gross income is the total income earned by a person during one:**

- (a) day      (b) week  
(c) month      ✓(d) year

2. **Calculate general sales tax @ 17% on an electricity bill when:**

**Previous meter reading = 4841,  
Present meter reading = 4941**

**Rate for first 100 units is Rs. 8 per unit.**

**Ans.** Present meter reading = 4941

Previous meter reading = 4841

Consumption = 4941 – 4841  
= 100 units

Cost of electricity = 100 × 8 = Rs. 800

GST @ 17% =  $\frac{17 \times 800}{100} = 17 \times 8$   
= Rs. 136

3. **Calculate general sales tax @ 16% on a gas bill when:**

**Gas charges = 1180,**

**Meter rent = 20**

**Hint: GST is applied on the sum of gas charges and meter rent.**

**Ans.** Gas charges = Rs. 1180

Meter rent = Rs. 20

Total cost = Rs. 1200

GST @ 16% =  $\frac{1200 \times 16}{100}$   
= 12 × 16 = Rs. 192

4. **Asad paid property tax Rs. 40000 on the property worth Rs. 800000. What is the rate of property tax?**

MATHEMATICS NOTES FOR 7<sup>TH</sup> CLASS (FOR ISLAMABAD)

**Ans.** Worth = Rs. 800000

Property tax = Rs. 40000

Rate of property tax = x

$$\frac{x \times 80000}{100} = 40000$$

$$\frac{8000x}{8000} = \frac{40000}{8000} = 5\%$$

**5. Find Zakat on the following assets at the end of lunar year.**

**Savings = Rs. 350000,**

**100gm gold @ Rs. 7500 per gram**

**Ans.** Savings = Rs. 350000

Cost gold = 7500 × 100 = 750000

Total worth = 350000 + 750000

= 1100000

Zakat @ 2.5% = ?

$$= \frac{2.5 \times 1100000}{100}$$

$$= 25 \times 1100$$

$$= \text{Rs. } 27500$$

**6. A property agent got a commission of Rs. 15000 both from the buyer and the seller. Find percentage of commission if he sold a plot for Rs. 750000.**

**Ans.** Price of plot = 750000

Commission = 15000

$$\text{From each side} = \frac{15000}{2} = 7500$$

Commission percentage = x

$$\frac{x}{100} \times 750000 = 7500$$

$$7500x = 7500$$

$$x = \frac{7500}{7500} = 1\%$$

**7. An agent sold rice @ 10% commission and paid Rs. 90000 to the owner after deducting his commission. Find the sale price of rice.**

**Ans.** Commission = 10%

Payment after deduction commission

$$= 90000$$

Sale price of rice = x

$$\frac{x \times 10}{100} = 90000$$

$$\frac{100x - 10x}{100} = 90000$$

$$\frac{100}{90} \times \frac{90}{100} x = \frac{90000 \times 100}{90}$$

$$x = 100000$$

**8. Calculate VAT if:**

**(i) output tax = 10% of Rs. 50000,**  
**input tax = 10% of Rs. 46000**

**(ii) input tax = Rs. 35.5,**  
**output tax = 12% of Rs. 350**

**Ans.** (i) VAT = output tax – input tax

$$= \left( \frac{10}{100} \times 50000 \right) - \left( \frac{10 \times 46000}{100} \right)$$

$$= 5000 - 4600$$

$$= \text{Rs. } 400$$

(ii) VAT = output tax – input tax

$$= \left( \frac{12}{100} \times 350 \right) - 35.5$$

$$= 42 - 35.5$$

$$= \text{Rs. } 6.5$$