



Dr. Bbosa Science

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A trader is a person who buys commodities and sells them at a profit.

The profit is the difference between the selling and cost prices

i.e. profit = selling price – cost price

$$\text{Percentage profit} = \frac{\text{profit}}{\text{cost price}} \times 100\%$$

When the selling price is lower than the cost price a trader makes a loss.

Loss = cost price – selling price (where the cost price is higher than the selling price)

$$\text{Percentage loss} = \frac{\text{loss}}{\text{cost price}} \times 100\%$$

Discount

When a buyer buys many commodities from a trader, a trader may make some reduction on the prices. The reduction in price or cost of a commodity is called a discount.

Discount = cost of commodity – money agreed on to be paid by the buyer

$$\text{Percentage discount} = \frac{\text{discount}}{\text{cost price}} \times 100\%$$

Total cost of item = sum of the cost of all the purchased items.

Balance = Money paid by the trader – Total cost commodities
(this money is returned to the buyer)

Unit cost is the cost of one item when the items are bought in a bundle or group.

Or

Cost of items = unit cost x number of items

Example 1

Saudah bought a dress at sh 6,000 and sold it at sh 7,200. What was her percentage profit?

$$\text{Profit} = 7200 - 6000 = 1200$$

$$\begin{aligned}\text{Percentage profit} &= \frac{\text{profit}}{\text{cost price}} \times 100\% \\ &= \frac{1200}{6000} \times 100\% = 20\%\end{aligned}$$

Example 2

A businessman sold a generator at Shs. 200,000 making a loss of 10,500.

(a) What was the cost price of the generator?

$$\begin{aligned}\text{Cost} &= \text{sale price} + \text{loss} \\ &= 200,000 + 10,500 \\ &= 210,500\end{aligned}$$

Example 3

A customer bought a fountain pen at Sh 1,500. The original price of the pen was Sh 2,000.

a) Work out the percentage discount.

$$\text{Discount} = 2000 - 1500 = 500$$

$$\text{Percentage discount} = \frac{\text{discount} \times 100}{\text{original price}} = \frac{500 \times 100}{2000} = 25\% \neq$$

b) If the customer was allowed the same percentage of discount on an article priced at Sh 5,000, how much did he pay for it?

$$\begin{aligned}\text{Price paid} &= \frac{(100 - \% \text{ discount})}{100} \text{ of the original price} \\ &= \frac{100 - 25}{100} \times 5000 = \text{shs. } 3750\end{aligned}$$

Example 4

Six plates cost sh 3,000. What is the cost of four plates?

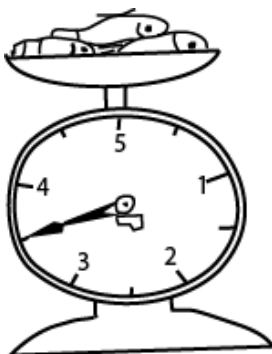
$$6 \text{ plate cost } 3000$$

$$1 \text{ plate cost } \frac{3000}{6} = 500$$

$$4 \text{ plate cost } 500 \times 4 = \text{shs } 2000$$

Exercise

1. If the cost of 6 kilograms of meat is shs4200, what is the cost of 4 kilograms?
2. A traders sold a pair of shoes at 32,800 making a profit of sh 1,200.
What was the cost price of the pair of shoes?
3. The profit on a shirt sold at 7, 900 was shs. 2,100. Calculate the cost price of the shirt.
4. The picture shows a scale used to weigh fish by a fishmonger.



- (a) What is the greatest mass, which can be recorded on the machine?
- (b) What is the mass of the three fish?
- (c) If the cost of fish is sh. 900 per kg, how much will the buyer pay for three fish?
- (d) What is the average cost of each fish?
5. Otim buys a cow from Okello and sells it to Mukasa at sh. 40,000 making a profit of 25%. What did Otim pay to Okello?
6. A pencil and an exercise book cost shs 400. An exercise book costs three times as much as the pencil. What is the cost of the pencil?

7. Okello bought a used shirt for shs 2, 500 and sold it at shs. 5000. What was the percentage profit?

8. Jane bought items from a shop:

(i) $2\frac{1}{2}$ kg of sugar at shs. 1,000 per kg.

(ii) $\frac{1}{2}$ kg of salt at shs. 600 per kg.

(iii) 3 bars of soap at shs. 700 per bar.

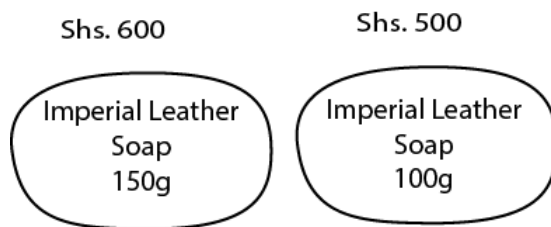
a) What was her total expenditure?

b) If she had shs. 5,000. How much money did she remain with?

9. Kakembo bought 650 grams of salt. If one kilogram of salt costs Sh. 300, what did Kakembo pay for the salt?

10. (a) Oumo wants to paint four walls of a building, each measuring 16 metres by $7\frac{1}{2}$ metres. Given that a tin of paint covers 60m^2 and that each tin of paint costs Shs. 14,500, find the total amount of money Oumo should spend on paint.

(b). A shop displayed price tags on various items, including tablets of Imperial Leather soap as shown below:



Which of these two tablets of soap is cheaper? (Show your working)

11. Kambere went to buy the following items from a wholesale shop to bring them and sell them in his retail shop. 50 kg of sugar at Shs. 50,000,

20litre of cooking oil at Shs. 18,000;

25bars of soap at 15,000

(i) If he wants to get a profit of 20% at what retail price will he sell 1 kg of sugar?

(ii) If he sells the cooking oil at Shs. 1,000 per litre, what would be his profit?

(iii) Kambere sold the soap and made a loss of 10%. What was the selling price for a bar of soap?

12. Nakalanzi bought the following items from a shop:

3½ kg of beans at Shs. 600 per kilogram,

1½ of salt at Shs. 250 per kilogram,

4 bars of soap at Shs. 700 per bar.

a) If Nakalanzi was given a discount of 20% on her total expenditure, how much was the discount?

b) How much did Nakalanzi pay?

13. Kamanda paid Sh. 12,600 for a shirt, which was at 10% discount. How much was the discount?

14. To make a school uniform for a primary seven girl, a tailor needs the following:

2 $\frac{3}{4}$ metres of cloth at Sh. 1,200/= per metre,

2 buttons at Sh. 200/= per button,

School barge costing Sh. 500/=

Thread Sh. 200/=,

Tailor's labour Sh. 3,000/=.

(a). Find the total cost for the dress.

(b) If Jane paid Sh. 7,030/= for the dress, what percentage discount was she given?

15. In Kabiriti market the cost of a cow is 7 times the cost of a goat. Opit bought a cow and a goat at Sh.232, 000/-, Find the cost of each of the two animals.

16. Mapeera bought 4 exercise books at shs.800. How much would he pay for 8 similar exercise books?

17. Opondo buys a bicycle at Shs, 95,000 then sells it 109,000. What is his profit?

18. A shopkeeper increased the price of a pencil by 20%. What is the cost of the pencil if its original price was shs.50?

19. Fatuma had shs. 5,000/= If she used 10% of her money to buy soap, what was her balance?

20. Mary bought 8 dresses at Shs 72,000/=. How much did each dress cost?

21. David had Shs 30,500 and she went to the market and bought the items shown in the table below.

a) Complete the table.

Item	Price	Total cost
.....kg of meat	Shs.2,2000 per kg	Shs 6,600
2 loaf of bread	Shs. 1,500 per loaf	Shs
2 litres of bread	Shs. per litre	Shs. 2,400
3 bars of soap	Shs..... Per bar	Shs. 2,250
..... bag of charcoal	Shs. 8500 Per bag	Shs. 8,500
Transport home	Shs. 30000	Shs. 3,000
Total expenditure		25750/=

b) How much money was she left with?

22. 40. Namusoke's mother bought 8 books at Shs. $(x - 150)$ each and 2 mathematical sets at $(x + 100)$ each. She spent Sh 5,300 altogether. Find the amount of money spent on books.

23. Below are postage charges of various items. Use the information to answer the question that follow.

LETTERS:

For the first 20 grams Shs 50

Each additional 20 grams Shs 30

Each extra grams Shs 10

PRINTED PAPERS:

For the first 50 grams Shs 50

Each additional 50 grams Shs 20

Each extra grams Shs 10

a) How much does it cost to post a letter weighing 120 grams?

b) How much does it cost 2 letters each weighing 120g and 2 printed papers each weighing 300g?

24. Kagodo sold two plots of land, one for sh 3,500,000, making a 10% profit and another for sh 5, 000,000, making a 20% profit. How much had Kagodo paid for the two plots?

25. A P7 pupil was sent to the market with sh 20,000 to buy the items shown in the table below. Use the table to answer the questions that follow.

Item	Price	Total cost
3kg of beans	Shs..... per kg	2100/=
3kg of sugar	Shs.1400/= per kg
4kg of meat	Shs per kg	10,000/=
..... loaves of bread	Shs.1600/= per kg	3,200/=
	Total expenditure	19500/=

- a) Complete the table above.
- b) What balance did the pupil get after buying the item if a discount, of 10% was given?

26. If 4 books costs Shs. 36,000, how much will 6 books of the same types cost?

27. The price of a shirt was increased by 10%. If the new price is Shs. 44,000. Find the old price.

28. Jane bought the following item from the market.

3kg of sugar at shs1, 400 per kg.

$1\frac{1}{2}$ kg of rice at Shs. 1,200 per kg.

$1\frac{1}{2}$ litres of paraffin at Shs. 900 per litre.

8 oranges at Shs 50 per orange.

If Jane remained with only Shs. 250, find the total amount of money she had at first.

(6 marks)

29. James sold a cow at shs 320,000. If he made a profit of shs 80,000, find the price at he bought the cow.

30. Betty was given sh. 20,000 to things to take to school and she bought the

following:

3 dozen of exercise books at 2,800 per dozen.

4 bars of washing soap at sh. 900 per bar.

4 tablets of bathing soap at sh.1,200 per tablet.

2 tubes of tooth paste at sh. 800 per tube.

(a) How much money did she spend altogether?

(05 marks)

(b) How much money did she remain with?

(02 marks)

31. If Nandi buys 4 text books for shs 240,000, how much will 9 similar books cost?

32. A man sells mangoes in heaps of five and eight. A heap of five mangoes costs shs 500 and a heap of eight mangoes cost shs. 1,000. He had 12 heaps of five and 14 heaps of eight mangoes.

(a) How many mangoes did he have altogether?

(03 marks)

(b) How much did he get after selling all the mangoes?

(03 marks)

33. Four packet of mango juice cost sh 12,000. What is the cost of seven similar packets?

34. Makeba's car uses 8litrer of petrol for every 50km.

(a) how much petrol does he need for a journey of 325km?

(2marks)

35. If litre of petrol costs shs. 2,900, how much money will he spent on petrol needed to run the car for $1\frac{1}{2}$ hour at a speed of 50 km per hour?

36. In a market, one buys 5 mangoes at shs. 1,500. How many similar mangoes does one buy with shs. 1,200?

37. Fatuma went to the market and bought the item shown in the table below.

(a) Complete the table.

ITEMS	QUANTITY	PRICE	AMOUNT
Eggs	15	Shs 300 per egg	Shs
Meat	1½ kg	Sh.....per kg	Shs 15,000
Cooking oilLitre	Shs4000 per litre	Shs 2,000
Sugar	1½ kg	Sh3, 000 per kg.	Shs
TOTAL EXPENDITURE			26,000

(b) If Fatuma went to the market with shs 30,000, how much did she remain with? (1mark)

38. Asimwe bought the following items from a shop

- (i) 3bar of soap at shs 1,200 per bar
- (ii) $1\frac{1}{2}$ kg of sugar at shs 3,000 per kg
- (iii) $\frac{1}{2}$ kg of salt at shs 1,000 per kg

(a) What was his total expenditure? (04marks)

(b) If he had shs 10,000, how much money did he remain with? (01mark)

39. A pupil bought a dozen books for shs 6,000. He later sold each book at shs 700. Calculate the profit.

40. Bbosa bought the items in the below from a shop.

(a) Complete the table

(04 marks)

Item	Price	Amount
..... bars of soap	Shs 2,200 per bar	Shs 6,600
2 loaves of bread	Shs..... per loaf	Shs 3,400
2½ kg of salt	Shs per kg	Shs 2000
Total expenditure		Shs

b) If Bbosa paid shs 10,800, what percentage discount was he given?

(02 marks)

$$\text{Discount} = 12000 - 10,800 = 1200$$

$$\text{Percentage discount} = \frac{\text{discount}}{\text{total}} \times 100 = \frac{1200}{12000} \times 100\% = 10\%$$

41. Apio bought the following items from a market

2kg of rice at sh3, 200 per kg

1½ kg of meat at sh 8,000 per kg

500g at salt at shs 1,400 per kg

A sacket of cooking oil at shs 1,750

How much money did she spend altogether?

(05marks)

42. Bbosa sold his radio to Aguti at sh 63,000 making a loss of 10 %. Aguti later sold the radio to chebet at a profit of 15%.

(a) Calculate the amount of money Bbosa paid for the radio.

(03marks)

(b) For how much money did Aguti sell the radio?

(02 marks)

43. A geometry set costs half as much as a book. A book costs shs 600 more than a fountain pen. If the total cost of the three items is shs 6,900, find the cost of the geometry set. (04marks)

44. Study and complete Mukasa's shopping table below (05 marks)

Item	Quantity	Unit cost	amount
sugar	3kg	Shper kg	Sh 14,400
Rice kg	Sh 5,000 per kg	Sh 2,500
Milk	250 ml	Sh 3, 000 per litre	Sh
Biscuits	2packets	Sh per packet	Sh
Total expenditure			Sh 29, 650

Suggested answers

1. If the cost of 6 kilograms of meat is shs4200, what is the cost of 4 kilograms?

Solution

6kg cost Shs 4200

$$1 \text{ kg costs shs } \frac{4200}{6} = \text{Shs}700$$

$$4 \text{ kg} = \text{Shs } 700 \times 4 = \text{Shs } 2,800$$

2. A trader sold a pair of shoes at 32,800 making a profit of sh 1,200.

What was the cost price of the pair of shoes?

$$\text{Cost price} = \text{Selling price} - \text{profit}$$

$$= 32800 - 1200$$

$$= \text{shs. } 31600$$

3. The profit on a shirt sold at 7,900 was shs. 2,100. Calculate the cost price of the shirt.

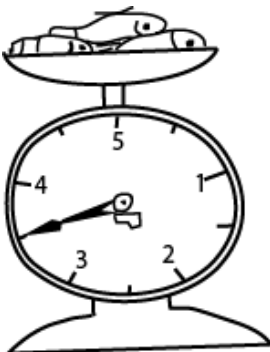
$$\text{Cost price} = \text{selling price} - \text{profit}$$

$$= 7900$$

$$- 2100$$

$$5800$$

4. The picture shows a scale used to weigh fish by a fishmonger.



(e) What is the greatest mass, which can be recorded on the machine?

The scale can record a maximum of 5kg

(f) What is the mass of the three fish?

The mass of the fish = $3\frac{1}{2}$

(g) If the cost of fish is sh. 900 per kg, how much will the buyer pay for three fish?

Cost = mass x unit cost
 $= 3\frac{1}{2} \times 900 = 3150$

(h) What is the average cost of each fish?

Average $\frac{\text{total}}{\text{number of items}} = \frac{3150}{3} = \text{shs } 1050 \text{ per fish}$

5. Otim buys a cow from Okello and sells it to Mukasa at sh. 40,000 making a profit of 25%. What did Otim pay to Okello?

Let cost of cow to Otim be x

$$\frac{125}{100} x = 40000$$

$$x = \frac{40000 \times 100}{125} = 32000$$

∴ Otim paid shs 32000 to Okello

6. A pencil and an exercise book cost shs 400. An exercise book costs three times as much as the pencil. What is the cost of the pencil?

Let the cost of pencil be x

The cost of a book = 3x

It implies that $3x + x = 400$

$$4x = 400$$

Divide by 4 either sides; $x = 100$

∴ the cost of a pencil = shs 100

7. Okello bought a used shirt for shs 2, 500 and sold it at shs. 5000. What was the percentage profit?

$$\text{Percentage profit} = \frac{\text{Selling price} - \text{cost price}}{\text{cost price}} \times 100\%$$

$$= \frac{5000 - 2500}{2500} \times 100 = 100\%$$

8. Jane bought items from a shop:
- (i) 2 ½ kg of sugar at shs. 1,000 per kg.
 - (ii) ½ kg of salt at shs. 600 per kg.
 - (iii) 3 bars of soap at shs. 700 per bar.
- c) What was her total expenditure?

Total expenditure = cost of sugar + cost of salt + cost of soap

Item	Unit quantity	quantity	Unit cost	total
Sugar	kg	2 ½	1000	2500
salt	kg	½	600	300
soap	bar	3	700	2100
			Total	4900

Therefore, total expenditure = shs 4900

- d) If she had shs. 5,000. How much money did she remain with?

$$\text{Balance left} = 5,000 - 4,900$$

$$= \text{Shs } 100$$

9. Kakembo bought 650 grams of salt. If one kilogram of salt costs Sh. 300, what did Kakembo pay for the salt?

$$1 \text{ kg cost } 300$$

$$1000\text{g cost } 300$$

$$650\text{g cost } \frac{300 \times 650}{1000} = \text{shs } 195$$

10. (a) Oumo wants to paint four walls of a building, each measuring 16 metres by $7\frac{1}{2}$ metres. Given that a tin of paint covers 60m^2 and that each tin of paint costs Shs. 14,500, find the total amount of money Oumo should spend on paint.

Area of the wall = $L \times W$

$$= 16 \times 7\frac{1}{2} = 16 \times \frac{15}{2} = 120\text{m}^2$$

Area of 4 walls = $120 \times 4 = 480\text{m}^2$

Number of tins of paint required

60m^2 require 1 tin of paint

480m^2 require $\frac{480 \times 1}{60} = 8$ tins of paint

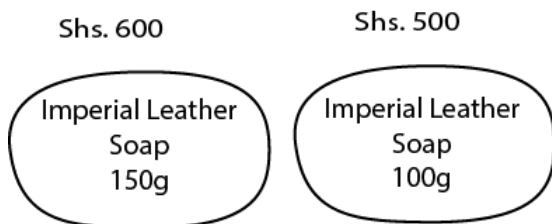
Cost of paint

1 tin of paint costs shs 14,500

8 tins of paint cost 14500×8

$$= 116000/=$$

- (b). A shop displayed price tags on various items, including tablets of Imperial Leather soap as shown below:



Which of these two tablets of soap is cheaper? (Show your working)

For imperial soap of 150g

150 g cost 600

$$1\text{g cost } \frac{600}{150} = 4$$

Hence, imperial soap 150 g is cheaper

For imperial soap of 100g

100 g cost 500

$$1\text{g cost } \frac{500}{100} = 5$$

11. Kambere went to buy the following items from a wholesale shop to bring them and sell them in his retail shop. 50 kg of sugar at Shs. 50,000,

20litre of cooking oil at Shs. 18,000;

25bars of soap at 15,000

(iv) If he wants to get a profit of 20% at what retail price will he sell 1 kg of sugar?

50 kg of sugar cost 50,000/=

$$1\text{kg of sugar cost} = \frac{50,000}{50} = 1000/=$$

With profit of 20%

$$\text{Selling price} = \frac{120}{100} \times 1000 = 1200 \neq$$

(v) If he sells the cooking oil at Shs. 1,000 per litre, what would be his profit?

20 litres of cost 18,000/=

$$1\text{litre of oil cost} = \frac{18,000}{20} = 900/=$$

$$\text{Profit per litre} = 1000 - 900$$

$$\text{Profit for 20 litres} = 20 \times 100 = 2000/=$$

(vi) Kambere sold the soap and made a loss of 10%. What was the selling price for a bar of soap?

25 bars of cost 15,000/=

$$1\text{bar of oil cost} = \frac{15,000}{25} = 600/=$$

Loss = 10%

$$\text{Selling price} = \frac{90}{100} \times 600 = 5400 \neq$$

12. Nakalanzi bought the following items from a shop:

3½ kg of beans at Shs. 600 per kilogram,

1½ of salt at Shs. 250 per kilogram,

4 bars of soap at Shs. 700 per bar.

c) If Nakalanzi was given a discount of 20% on her total expenditure, how much was the discount?

Total cost = cost of beans + cost of Salt + cost of soap

$$= 3 \frac{1}{2} \times 600 + 1 \frac{1}{2} \times 250 + 4 \times 700$$

$$= \frac{7}{2} \times 600 + \frac{3}{2} \times 250 + 2800$$

$$= 2100 + 375 + 2800 = 5275$$

$$20\% \text{ discount} = \frac{20}{100} \times 5275 = \text{shs } 1,055$$

d) How much did Nakalanzi pay?

$$\text{She paid } 5275 - 1055 = 4,220$$

13. Kamanda paid Sh. 12,600 for a shirt, which was at 10% discount. How much was the discount?

Let the price of the shirt be x

$$\Rightarrow \frac{90x}{100} = 12600$$

$$x = 14000$$

$$\begin{aligned} \text{discount} &= \text{original price} - \text{actual price} \\ &= 14000 - 12600 \\ &= 1400 \end{aligned}$$

14. To make a school uniform for a primary seven girl, a tailor needs the following:

$2\frac{3}{4}$ metres of cloth at Sh. 1,200/= per metre,

2 buttons at Sh. 200/= per button,

School barge costing Sh. 500/=

Thread Sh. 200/=,

Tailor's labour Sh. 3,000/=.

(a). Find the total cost for the dress.

$$\text{Cost of a dress} = 2\frac{3}{4} \times 1200 + 2 \times 200 + 500 + 200 + 3000$$

$$= \frac{11}{4} \times 1200 + 400 + 500 + 200 + 3000$$

$$= 7400$$

(c) If Jane paid Sh. 7,030/= for the dress, what percentage discount was she given?

$$\text{Discount} = 7400 - 7030 = 370$$

$$\text{Percentage discount} = \frac{370 \times 100}{7400} = 5\%$$

15. In Kabiriti market the cost of a cow is 7 times the cost of a goat. Opit bought a cow and a goat at Sh.232, 000/-, Find the cost of each of the two animals.

Let the cost of a goat be x

The cost of a cow will be $7x$

$$\Rightarrow 7x + x = 232000$$

$$8x = 232000$$

$$x = 29000$$

the cost of a goat shs 29000

the cost of a cow is shs $29000 \times 7 = 203000$

16. Mapeera bought 4 exercise books at shs.800. How much would he pay for 8 similar exercise books?

4 books cost 800

By cross multiplication

$$8 \text{ books cost } \frac{800 \times 8}{4} = 1600$$

17. Opondo buys a bicycle at Shs, 95,000 then sells it 109,000. What is his profit?

Profit = selling price – cost price

$$= 109000$$

$$- 95000$$

$$\text{shs } 14000$$

18. A shopkeeper increased the price of a pencil by 20%. What is the cost of the pencil if its original price was shs.50?

$$\text{New price} = \frac{120}{100} \times 50 = \text{shs } 60$$

19. Fatuma had shs. 5,000/= If she used 10% of her money to buy soap, what was her balance?

$$\text{Money used to buy soap} = \frac{10}{100} \times 5000 = 500$$

$$\text{Balance} = 5000 - 500 = 4500$$

20. Mary bought 8 dresses at Shs 72,000/=. How much did each dress cost?

$$\text{Cost per dress} = \frac{\text{Total cost}}{\text{number of dresses}} = \frac{72,000}{8} = \text{shs. } 9000$$

21. David had Shs 30,500 and she went to the market and bought the items shown in the table below.

a) Complete the table.

Item	Price	Total cost
3kg of meat	Shs.2,2000 per kg	Shs 6,600
2 loaf of bread	Shs. 1,500 per loaf	Shs 3000
2 litres of bread	Shs. 1200 per litre	Shs. 2,400
3 bars of soap	Shs. 750 Per bar	Shs. 2,250
1 bag of charcoal	Shs. 8500 Per bag	Shs. 8,500
Transport home	Shs. 30000	Shs. 3,000
Total expenditure		25750/=

b) How much money was she left with?

By subtraction

$$\text{Balance} = 30,500 - 25750 = \text{shs. } 4750$$

22. Namusoke's mother bought 8 books at Shs. $(x - 150)$ each and 2 mathematical sets at $(x + 100)$ each. She spent Sh 5,300 altogether. Find the amount of money spent on books.

Total cost = $8(x - 150) + 2(x+100) = 5300$	$10x - 1000 = 5300$
Remove brackets	Collect like terms
$8x - (8 \times 150) + 2x + (2 \times 100) = 5300$	$10x = 6300$
$8x - 1200 + 2x + 200 = 5300$	$x = 630$
Collect like terms	Money spent of book = $8(630 - 150)$
$8x + 2x - 1200 + 200 = 5300$	$= 480 \times 8$
$10x - 1000 = 5300$	Shs. = 3840/=

23. Below are postage charges of various items. Use the information to answer the question that follow.

LETTERS:

For the first 20 grams Shs 50

Each additional 20 grams Shs 30

Each extra grams Shs 10

PRINTED PAPERS:

For the first 50 grams Shs 50

Each additional 50 grams Shs 20

Each extra grams Shs 10

c) How much does it cost to post a letter weighing 120 grams?

$$120 \text{ g} = 20\text{g} + 20\text{g} + 80\text{g}$$

$$\text{Cost} = 50 + 30 + 80 \times 10 = 80 + 800 = \text{shs } 880$$

d) How much does it cost 2 letters each weighing 120g and 2 printed papers each weighing 300g?

Cost of a printed paper weighing 300g

$$300\text{g} = 50 \text{ g} + 50 \text{ g} + 200\text{g}$$

$$\text{Cost} = 50 + 20 + 200 \times 10 = \text{shs } 2070$$

$$\text{Cost of 2 printed papers weighing 300g each} = 2080 \times 2 = \text{shs } 4140$$

$$\text{Cost of 2 letter weighing 120g each} = 880 \times 2 = \text{shs } 1760$$

$$\text{Total cost} = 4140 + 1760 = \text{shs } 5900$$

24. . Kagodo sold two plots of land, one for sh 3,500,000, making a 10% profit and another for sh 5, 000,000, making a 20% profit. How much had Kagodo paid for the two plots?

Let the cost of the first plot be x

$$\frac{110}{100} \text{ of } x = 3,500,000$$

$$x = \frac{100}{110} \times 3,500,000 = 3,181,818 \neq$$

Let the cost of the second plot be y

$$\frac{120}{100} \text{ of } y = 5,000,000$$

$$y = \frac{100}{120} \times 5,000,000 = 4,166,667 \neq$$

the cost of two plots of land = 3,181,818 + 4,166,667 = shs. 7,348,485/=

25. A P7 pupil was sent to the market with sh 20,000 to buy the items shown in the table below. Use the table to answer the questions that follow.

Item	Price	Total cost
3kg of beans	Shs 700 per kg	2100/=
3kg of sugar	Shs.1400/= per kg	4200
4kg of meat	Shs 2500 per kg	10,000/=
2 loaves of bread	Shs.1600/= per kg	3,200/=
	Total expenditure	19500/=

c) Complete the table above.

d) What balance did the pupil get after buying the item if a discount, of 10% was given?

$$\text{Discount} = \frac{10}{100} \times 19500 = 1950$$

$$\text{Money paid} = 19500 - 1950$$

$$= 17550/=$$

26. If 4 books costs Shs. 36,000, how much will 6 books of the same types cost?

4 book cost 36,000

$$1 \text{ book costs } \frac{36000}{4} = 9000$$

$$6 \text{ books cost} = 9000 \times 6 = 54000$$

\therefore six books cost shs. 54,000

27. The price of a shirt was increased by 10%. If the new price is Shs. 44,000. Find the old price.

Let the old price be x

$$\frac{(100 + 10)x}{100} = 44000$$

$$x = \frac{44000 \times 100}{110} = \text{shs. } 40,000$$

28. Jane bought the following item from the market.

3kg of sugar at shs1, 400 per kg.

$1\frac{1}{2}$ kg of rice at Shs. 1,200 per kg.

$1\frac{1}{2}$ litres of paraffin at Shs. 900 per litre.

8 oranges at Shs 50 per orange.

If Jane remained with only Shs. 250, find the total amount of money she had at first.

(6 marks)

Item	Quantity	Unit price	cost
Sugar	3 kg	1,400 per kg	4200
rice	$1\frac{1}{2}$ kg	1,200 per kg	1800
Paraffin	$1\frac{1}{2}$ kg	900 per kilo	1350
Orange	8	50 per orange	400
Total			7750

Since he remained with 250

$$\text{She had } 7750 + 250 = 8000$$

29. James sold a cow at shs 320,000. If he made a profit of shs 80,000, find the price at he bought the cow.

Let the cost price be X

$$80000 = 320000 - x$$

$$x = 320000 - 80000$$

$$= 240000$$

30. Betty was given sh. 20,000 to things to take to school and she bought the following:

- 3 dozen of exercise books at 2,800 per dozen.
 - 4 bars of washing soap at sh. 900 per bar.
 - 4 tablets of bathing soap at sh.1,200 per tablet.
 - 2 tubes of tooth paste at sh. 800 per tube.
- (c) How much money did she spend altogether? (05 marks)

Item	Quantity	Rate	cost
Exercise book	3dozen	2,800	8.400
Washing soap	4 bars	900	3600
Bathing soap	2 tables	1200	4800
Tooth paste	2 tubes	800	1600
Total cost			18,400

(d) How much money did she remain with? (02 marks)

$$\text{The money he remained with} = 20000 - 18,400 = 1,600$$

31. If Nandi buys 4 text books for shs 240,000, how much will 9 similar books cost?

4 books cost 240000

$$9 \text{ books cost (cross multiply)} = \frac{240000 \times 9}{4} = 540000$$

∴ 9 books cost shs. 540000

32. A man sells mangoes in heaps of five and eight. A heap of five mangoes costs shs 500 and a heap of eight mangoes cost shs. 1,000. He had 12 heaps of five and 14 heaps of eight mangoes.

(c) How many mangoes did he have altogether? (03 marks)

$$\text{Mangoes in heaps of five} = 5 \times 12 = 60 \text{ mangoes}$$

$$\text{Mangoes in heaps of 8} = 8 \times 12 = 112$$

$$\text{Total number of mangoes} = 112 + 60 = 172 \text{ mangoes}$$

(d) How much did he get after selling all the mangoes?

(03 marks)

1 heap of 5 mangoes cost 500

12 heaps of 5 mangoes cost $12 \times 500 = 6000$

1 heap of 8 mangoes cost 1000 marks

14 heaps of 8 mangoes cost $14 \times 1000 = 14000$

33. Four packets of mango juice cost sh 12,000. What is the cost of seven similar packets?

4 mangoes cost 12,000

1 mango costs

7 mangoes cost $\frac{12000 \times 7}{4} = \text{shs. } 21,000$

34. Makeba's car uses 8 litres of petrol for every 50 km.

(a) how much petrol does he need for a journey of 325 km?

(2 marks)

50 km take 8 litres

325 km take $\frac{8 \times 325}{50} = 52 \text{ litres}$

$\therefore 325 \text{ km require } 52 \text{ litres}$

35. If a litre of petrol costs shs. 2,900, how much money will he spend on petrol needed

to run the car for $1\frac{1}{2}$ hours at a speed of 50 km per hour?

Distance = speed \times time = $50 \times 1\frac{1}{2} = 75 \text{ km}$

Total fuel required to run 75 km

50 km require 8 litres

75 km require $\frac{8 \times 75}{50} = 12 \text{ litres}$

Cost of 12 litres = $12 \times 2900 = \text{shs. } 34800$

36. In a market, one buys 5 mangoes at shs. 1,500. How many similar mangoes does one buy with shs. 1,200?

1500 buy 5 mangoes

1200 buy $\frac{5 \times 1200}{1500} = 4$

37. Fatuma went to the market and bought the item shown in the table below.

(c) Complete the table.

ITEMS	QUANTITY	PRICE	AMOUNT
Eggs	15	Shs 300 per egg	Shs 4500
Meat	1½ kg	Sh6,000per kg	Shs 15,000
Cooking oil	½Litre	Shs4000 per litre	Shs 2,000
Sugar	1½ kg	Sh3, 000 per kg.	Shs 4500
TOTAL EXPENDITURE			26,000

(d) If Fatuma went to the market with shs 30,000, how much did she remain with? (1mark)
 The money Fatuma remained with $30000 - 26000 = 4000$

38. Asiimwe bought the following items from a shop

- (iv) 3bar of soap at shs 1,200 per bar
- (v) $1\frac{1}{2}$ kg of sugar at shs 3,000 per kg
- (vi) $\frac{1}{2}$ kg of salt at shs 1,000 per kg

(b) What was his total expenditure? (04marks)

Item	Quantity	rate	total
Soap	3	1200	3600
Sugar	1 ½	3000	4500
Salt	½	1000	500
Total			shs. 8,600

(b)If he had shs 10,000, how much money did he remain with? (01mark)

$$\text{Balance} = 10000 - 8600 = \text{shs. } 1400$$

39. A pupil bought a dozen books for shs 6,000. He later sold each book at shs 700. Calculate the profit.

$$\text{Total sale} = 12 \times 700 = 8400$$

$$\text{Profit} = \text{total sale} - \text{cost}$$

$$= 8400 - 6000 = 2400$$

40. Bbosa bought the items in the below from a shop.

(a) Complete the table

(04 marks)

Item	Price	Amount
3 bars of soap	Shs 2,200 per bar	Shs 6,600
2 loaves of bread	Shs 1700 per loaf	Shs 3,400
2½ kg of salt	Shs 800 per kg	Shs 2000
Total expenditure		Shs 12000

b) If Bbosa paid shs 10,800, what percentage discount was he given?

(02 marks)

$$\text{Discount} = 12000 - 10,800 = 1200$$

$$\text{Percentage discount} = \frac{\text{discount}}{\text{total}} \times 100 = \frac{1200}{12000} \times 100\% = 10\%$$

41. Apio bought the following items from a market

2kg of rice at sh3, 200 per kg

1½ kg of meat at sh 8,000 per kg

500g at salt at shs 1,400 per kg

A sacket of cooking oil at shs 1,750

How much money did she spend altogether?

(05marks)

Item	Quantity	Rate	total
Rice	2 kg	3200	6400
meat	1 ½ kg	8000	12000
salt	500g or ½ kg	1400	700
Oil sacket	1	1750	1750
Total			20850

42. . Bbosa sold his radio to Aguti at sh 63,000 making a loss of 10 %. Aguti later sold the radio to chebet at a profit of 15%.

(c) Calculate the amount of money Bbosa paid for the radio.

(03marks)

Let the amount be Q

$$(100-10)\%Q = 6300$$

$$Q = \frac{6300 \times 100}{90}$$

$$= 7000$$

(d) For how much money did Aguti sell the radio?

(02 marks)

Let the selling price be P

$$P = \frac{(100+15) 6300}{100} = 7245$$

Aguti sold the radio at Shs. 7245

43. A geometry set costs half as much as a book. A book costs shs 600 more than a fountain pen. If the total cost of the three items is shs 6,900, find the cost of the geometry set. (04marks)

Let the cost of geometry set = x

The cost of the book will be = 2x

The cost of fountain pen = 2x – 600

Total cost = x + 2x + 2x – 600 = 6900

$$5x = 7500$$

$$x = 1500$$

A geometry set cost shs. 1500

44. Study and complete Mukasa's shopping table below (05 marks)

Item	Quantity	Unit cost	amount
sugar	3kg	Sh 480 per kg	Sh 14,400
Rice	½ kg	Sh 5,000 per kg	Sh 2,500
Milk	250 ml	Sh 3, 000 per litre	Sh 750
Biscuits	2packets	Sh 6000 per packet	Sh 12000
Total expenditure			Sh 29, 650