

**SECTION A (40 MARKS)**

**Answer all questions in this section.  
Questions 1 to 20 carry two marks each.**

1. Work out:  $52 - 43$ .

6. Simplify:  $8 + 8 + 8$

2. Round off 29.99 to the nearest tenth.

7. Using a pencil, a ruler and a pair of compasses only, construct an angle of  $30^\circ$  in the space below.

3. Workout:  $2 - \frac{2}{3}$

8. Write 3985 in scientific notation.

4. Find the square root of 0.09.

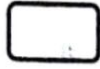
5. What is the next numbers in the sequence?

9. Express 25cm as a percentage of 5 metres.

1, 4, 9, 16, \_\_\_\_\_, \_\_\_\_\_.



10. Write 109 in Roman numerals.



11. Express 12:25pm in a 24-hour clock system.

14. Seeta Junior will have a netball match with Mbuya Parents next week. What is the probability that Seeta Junior will win the match?

15. Solve:  $1 - 3 = w$  (finite 5)

12. In the figure below find the value of  $x$  in degrees.



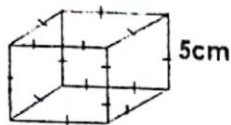
16. A set has 16 subsets. How many elements does the set have?

13. Simplify:  $2 - 3(p - 2)$

17. What mathematical property will make the statement below correct?

$$(2+7) + 8 = 2 + (7 + 8)$$

18. Given the figure below.



Workout its volume.

19. Workout the mean of  $3p$ ,  $7$ ,  $3$ ,  $2p$  and  $0$ .

20. Write a single number that has been expanded to give  $(8 \times 10^2) + (3 \times 10^0) + (5 \times 10^{-2})$

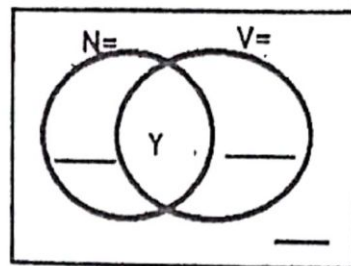
## SECTION B (60MARKS)

Attempt all questions in this section. Marks for each question are indicated in the brackets.

21. In a family of 11 members, 7 play volleyball (V), 6 play netball (N), some members play both games while one person play's none of the two games.

(a) Complete the Venn diagram below. (3mks)

$n(\Sigma)$



(b) Find the value of  $y$ . (2marks)

c) Workout the probability of picking a family member who plays only one game. (1mark)

22. (a) Change  $\frac{1}{4}$  into a decimal fraction. (2mks)

(b) Simplify:  $\frac{0.18 + 1.82}{0.25}$  (3mks)

(b) Workout the sum of all prime numbers between 80 and 90. (2mrks)

23. The figure below is representing the magic square of 3 by 3. Study it and find the values of the unknown letters. (4mrks)

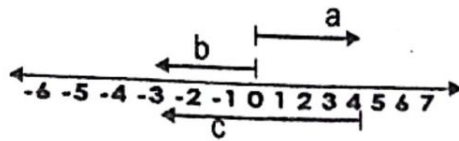
8	3	x
p	5	p
t	n	2

25. (a) Find the principle that can yield an interest of sh. 7200 in a bank that gives an interest rate of 20% per year in a period of 6 months. (3mks)

(b) Calculate the amount of money that will one account by the end of the period of 6 months. (2mks)

24. (a) Prime factorise 48 using set notation. (2mks)

26. (a) Use the number line below to find the values of the letters shown by the arrows.



(i)  $a =$  \_\_\_\_\_ (1mrk@)

(ii)  $b =$  \_\_\_\_\_

(iii)  $c =$  \_\_\_\_\_

- (b) Write a mathematical sentence represented above. (2mks)

- (b) Work out the average speed of the bus for the whole journey. (2mks)

28. A girl is 20 years younger than her sister. In 15 years, time the sister will be twice as old as the girl. Work out the age of each person now. (4mks)

27. A bus travelling at 80km/hr took 2 hours and 30 minutes to cover part of the journey. The rest of the journey was covered in  $1\frac{1}{2}$  hours at a speed of 120 km/hr.

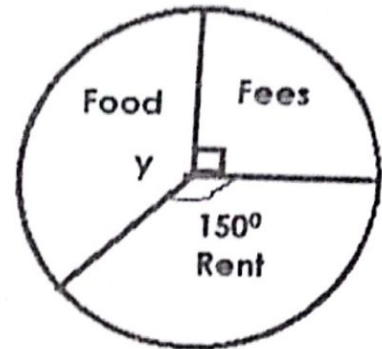
- (a) What distance did the bus cover altogether? (3mks)

29. (a) Study and complete the shopping list in the table below.

Item	Qty	Unit Cost	Amount
Tea leaves	1½kg	sh.....	sh. 9000
posho	2kg	sh 3400	sh.....
soap	.....bars of soap	sh 1800	sh 5850
salt	750gm	sh 2000 per kg	sh .....
Total expenditure			.....

(5mks)

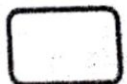
30. The pie chart represents Sarah's expenditure per month.



(a) Find the value of  $y$ . (2mks)

(b) If Amina was given Sh. 1450 as balance after paying for all the items, how much did she have at first. (1mk)

(b) Given that Sarah spends sh. 36,000 more on rent than on food, how much does she earn per month? (3mks)





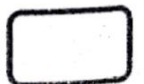
26. (a) Use a ruler and compasses only, construct a quadrilateral ABCD where  $AB = 7\text{cm}$ ,  $\angle ABC = \angle BAD = 60^\circ$  and  $AD = BC = 3.5\text{cm}$ . (5mks)

31. Jumbo, Tendo and Mambo contributed sh. 24,000, sh. 36,000 and sh. 60,000 respectively for a joint business which made a profit of sh. 51,000 at the end of the business. They agreed to separate and each one of them started his own and they shared the total money according to their initial contributions. How much did each one of them get? (5mks)

32. (a) Using a ruler, pencil and a pair of compasses only, construct a quadrilateral ABCD where  $AB = 7\text{cm}$ ,  $\angle ABC = \angle BAD = 60^\circ$  and  $AD = BC = 3.5\text{cm}$ . (5mks)

7.

(b) Measure the length of DC in cm. (1mrk)



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