

### BETTER EDUCATONAL CONSULTANCY

## PRE-PRIMARY LEAVING EXAMINATION

SET ONE, 2022 MATHEMATICS

### Time Allowed: 2 hours 30 minutes

Ca	andidate's Name:
Ca	andidate's Signature:
S	chool Random No.
Di	istrict ID:
Re	ead the following instructions carefully:
1.	Do not write your <b>school</b> of <b>district</b> name anywhere on this paper.
2.	This paper has two sections: <b>A</b> and <b>B</b> . Section <b>A</b> has <b>20</b> questions and section <b>B</b> has <b>12</b> questions.
3.	Answer <b>all</b> questions. <b>All</b> answers to both sections <b>A</b> and <b>B</b> must be written in the spaces provided.
4.	All answers <b>must</b> be written using a <b>blue</b> or <b>black</b> ball point pen or ink. Any work written in pencil will <b>not</b> be marked.
5.	<b>No calculators</b> are allowed in the examination room
6.	Unnecessary <b>changes</b> in your work and handwriting that cannot be easily read may lead to <b>loss of marks.</b>
6.	Do not fill anything in the table indicated:

Random No.

Index No.

inside the question paper.

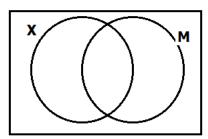
#### FOR EXAMINER'S USE ONLY

Personal No.

EXR'S NO.

2. Write 78,096 in words.

3. On the Venn diagram below, shade (X U M)'



4. Remove the brackets and simplify: 5h + 4 - 3(h - 3)

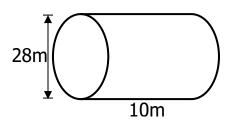
5. A trader bought a cow but later sold it for sh. 630,000 making a profit of sh. 76,500. For how much had the trader bought the cow?

6. Work out: 2 - 5 = (Mod 7)

7. Deborah covered a distance of 75km in 45 minutes. Calculate Deborah's average speed in Km/hr.

8. A basket has 34 mangoes of which 19 of them are ripe and the rest are raw. What is the probability of picking at random a raw mango from the basket?

9. The figure below is a cylinder. Calculate its volume. (take  $\pi = \frac{22}{7}$ )



10. Work out:  $3^{1}/_{3} - 2^{1}/_{2}$ 

11. Using a pair of compasses, a ruler and a pencil only, construct an angle of  $135^{\circ}$  at point G.



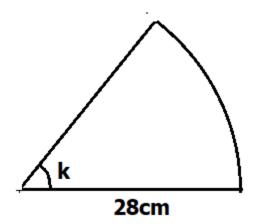
12. Given that set  $P = \{All \text{ prime numbers less than } 17\}$ , find n(P).

13. Find the least number of straws that can be shared by either 24 boys, 30 boys or 36 boys leaving a remainder of 3 straws in each case.

14. By what percentage will 150kg increase to become 174kg?

15. If 3x - 16 = -4, find the value of x.

16. Below is a sector whose area is 308cm2. Study it carefully.



Calculate the value of k in degrees. (Take  $\pi = \frac{22}{7}$ )

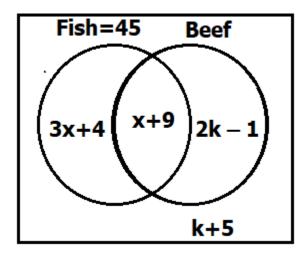
17. A teacher shared 962 sweets equally among his 74 pupils who excelled in a test. How many sweets did each pupil get?

18. Express 15 in binary.

- 19. Find the next number in the sequence below: 5, 6, 10, 19, 35, \_\_\_\_\_
- 20. Work out the supplement of 56°.

# **Section B**

21. The Venn diagram below shows the preferences of guests.



(a) Find the value of x.

(b)	Work out the value of k if	43 guests did not eat fish.	(2 ma	ırks)
(c)	How many guests ate only	y one type of sauce?	(1 ma	nrk)
22.	Below is Manyindo's shop	ping table. UNIT COST	AMOUNT	
	2 loaves of bread	Sh2500 per loaf	Sh	

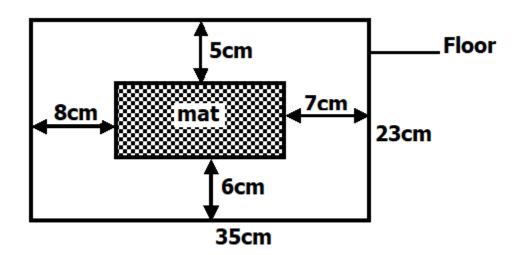
1 ½ litres of milk	Sh	Sh 1800
kg of simsim	Sh6000 per Kg	Sh36000
	TATAL	

(a) Complete the table. (4 marks)

(b) If Manyindo was offered a discount of 10%, how much did he pay for the above items? (1 mark)

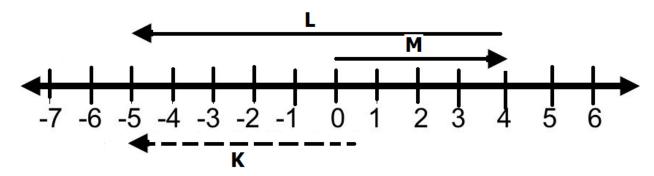
23. Nakku spends  $\frac{1}{3}$  of her weekly allowance on food,  $\frac{3}{7}$  of the remainder on transport and saves the rest. Calculate the amount of money Nakku saves if she earns sh. 84,000 per week. (5 marks)

24. The diagram below shows a mat placed on the floor of the house.



At the market, a hen costs sh. 55000 less than a cock. A pigeon costs a third as 25. much as a cock. Nkoko paid sh. 78,000 for all the three fowls. Work out the cost of each fowl. (5 marks)

26. Study the number line below carefully.



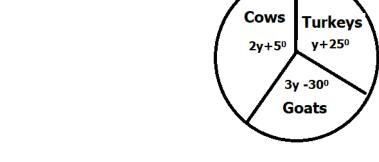
Write the integers represented by arrows: (a)

(3 marks)

- (i) L =
- (ii) K = \_\_\_\_\_ (iii) M = \_\_\_\_\_

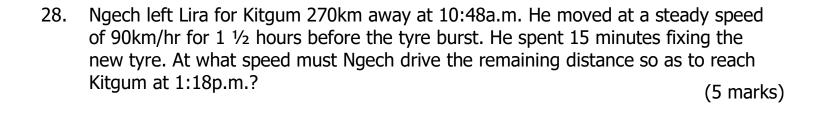
(b) What mathematical sentence is illustrated on the number line above? (2 marks)

27. The pie-chart below shows how farmer a portioned his farmland. Study it carefully.



(a) Find the value of y. (2 marks)

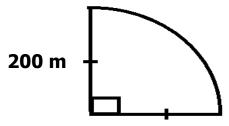
(b) If goats occupy 50 more acres of the land than the cows, calculate the total farmland acreage. (3 marks)



- 29. The exterior angle of a regular polygon is 36 degrees less than the interior angle.
- (a). Calculate the size of the exterior angle. (2 marks)

(b) Work out the interior angle sum of the regular polygon. (3 marks)

30. a) The figure below represents Apollo's plot of land. Study it carefully.



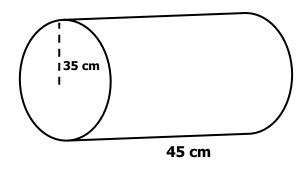
Calculate the perimeter of the plot. (Use  $\pi = 3.14$ )

(2 marks)

b) The cylindrical drum below was cut open to make a rectangular metal sheet.

Calculate the area of the metal formed. (Take  $\pi = \frac{22}{7}$ )

(3 marks)



31(a) Use distributive property to work out:  $(87 \div 5) - (32 \div 5)$ 

(2 marks)

(b) Solve for n in  $3^{2n} \div \frac{1}{27} = 1$ 

32(a) Express 180 as a product of its prime factors.

(b) The LCM of two numbers is 108 and their GCF is 9. If one of the numbers is 27, find the other number. (3 marks)