UNIQUE STAR EXAMINATIONS BOARD

PRE PRIMARY LEAVING MOCK SET TWO

2024

MATHEMATICS

Time allowed : 2 hours 30 minutes

Index No.	Random No.					Personal No.		

Candidate's name : ....

Candidate's signature : ....

School Random number : ....

District No. : ⬜⬜⬜⬜

Read the following instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.
2. This paper has two sections: A and B.
   Section A has **20** questions and section B has **12** questions. The paper has **15 printed papers** altogether.
3. Answer **all** questions. All the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **NOT** be marked.
5. **No calculators** are allowed in the examination room.
6. Unnecessary **changes** in your work and handwriting that cannot easily be read may lead to loss of marks.
7. Do not fill anything in the table indicated: **"For examiners' use only"** and the boxes inside the question paper.

FOR EXAMINER'S USE ONLY		
Qn. No.	MARKS	EXR'S NO.
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

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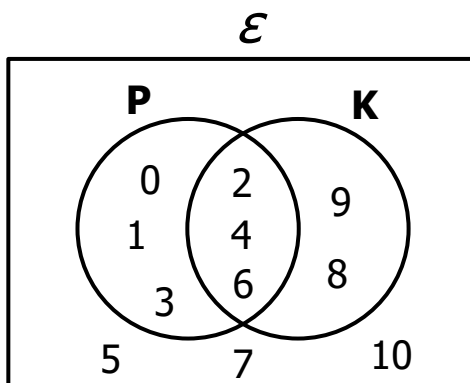
Turn over

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

1. Work out: 624 – 513

2. Express 264 in Roman numerals.

3. Simplify: $1\frac{1}{3} \div \frac{2}{3}$

4. Use the Venn diagram below to find n(**P**∪**K**)$^/$
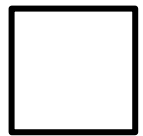
5. Arrange $^+3$, $^-1$, $^-2$, 0 and $^+2$ in ascending order.

☐

6. Solve the equation: $2m - 7 = 1$

7. Work out: $1101_{two} - 11_{two}$

8. Using a ruler, a pencil and a pair of compasses only, construct an angle of 30°.

9. Find the number expanded to give $(2 \times 10^3) + (4 \times 10^2) + (7 \times 10^{-1})$

10. Find the highest common factor (HCF) of **42** and **56**.

11. A poultry farmer paid sh. 31200 for 3 hens. How much money would she pay for 12 hens of the same size?

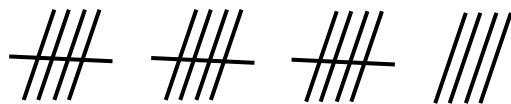12. The area of the shaded part in the prism below is 64m².
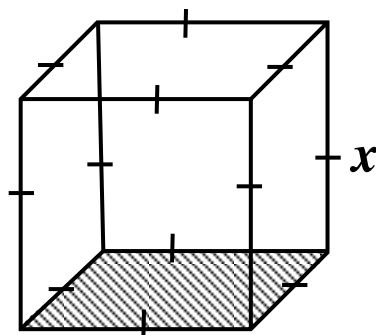
Find the value of x

13. Work out: $6 \overline{)5454}$

14. Set Q has 4 elements. Find the number of subsets that can be obtained from set Q.

15. Given that v = 6 and w = 4. Find the value of $2w - \frac{1}{2}v$.
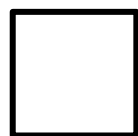
16. The tallies below represent the number of boys in a class of 40 pupils.

$$\cancel{||||}\ \cancel{||||}\ \cancel{||||}\ ||||$$

Find the number of girls in the class.

17. A sack was $\frac{3}{4}$ full of sugar. Two thirds of the sugar in the sack was sold. Find the remaining fraction of sugar in the sack.

18. Find the complement of 62º.

19. Fifteen soldiers stood 2.5 metres apart in a straight line. Calculate the length of the line.

20. Study and complete the table below.

No. of coins	Value of each coin	Amount
12	Sh 1,000	Sh 12,000
....	Sh 50	Sh 1,250
9	Sh 200	....
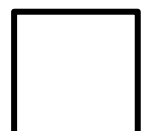
SECTION B: 60 MARKS

*Answer **all** questions in this section.*
Marks for each question are indicated in brackets.

21. Below are cards with digits. Use them to answer questions that follow.

| 6 | 7 | 0 | 3 |
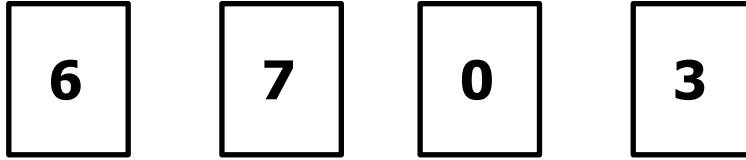
(a) Form the greatest and least 4-digit numerals using the given digits on the cards.
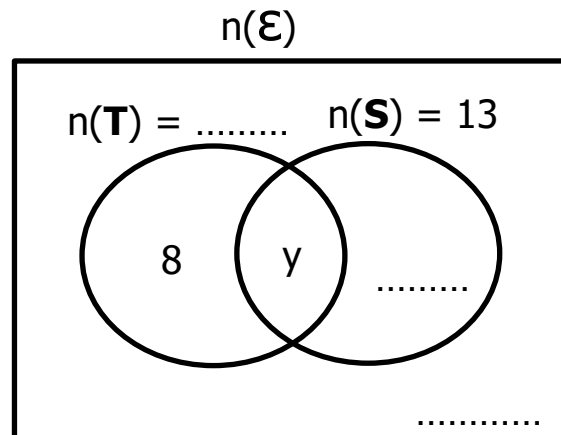
    (i) greatest 4-digit numeral. *(01 mark)*

    (ii) least 4-digit numeral. *(01 mark)*

(b) Find the sum of the least and the greatest 4-digit numerals formed above. *(02 marks)*

22. On the Venn diagram below, n(S) = 13, n(T∩S) = y, n(T-S) = 8 while n(T∪S)′ = 6

(a) Use the given information to complete the Venn diagram below.

(03 marks)

n(Ɛ)

n(**T**) = ………   n(**S**) = 13

8   y   ………

…………
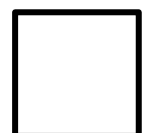
(b) Given that n(S-T) = 9, find:
(i) the value of y   *(02 marks)*

(ii) n(Ɛ)   *(01 mark)*

23. The area of the circular flower garden is 154 square metres.
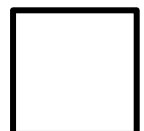
Calculate the distance around the garden. (Use $\pi = \dfrac{22}{7}$)

(04 marks)

24. (a) Express 0.1666 … as a simplified common fraction.

(02 marks)

(b) Simplify: $\dfrac{0.48}{1.2 \times 1.6}$ *(03 marks)*

Turn Over

25. (a) Using a ruler, a pencil and a pair of compasses only, construct a triangle ABC in which angle ABC =120º, line BC = 8cm and line AB = 6.5cm. *(04 marks)*

(b) Measure:
   (i) line AC *(01 mark)*

   (ii) angle BAC *(01 mark)*

26. Last Thursday, Abdul and Steven went to the hospital to get treatment. They were told to visit the hospital every after 12 days and 8 days respectively.

What day of the week will they visit the hospital together again?

(04 marks)
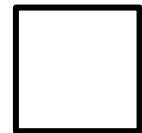
27. Annet went shopping and bought the following items:

6 oranges at sh 500 each.

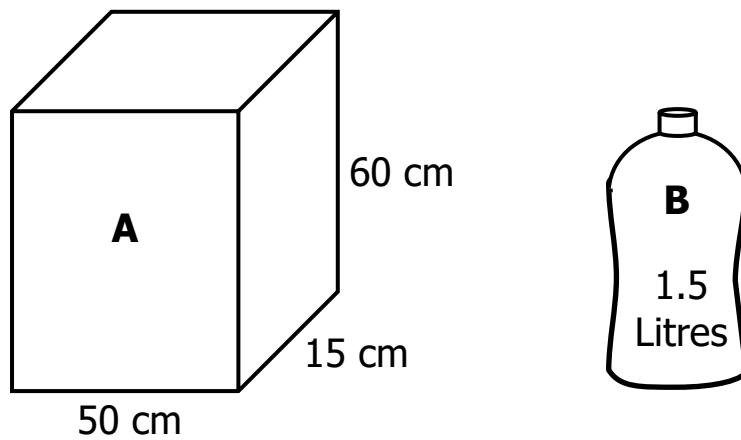12 tomatoes at sh 400 for every 3 tomatoes.

$1\frac{1}{2}$ kg of sugar at sh 4000 per kilogram.
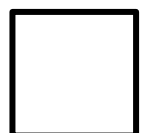
4 mangoes at sh 2500.

If she remained with sh 2900, how much money did she have at first?

(05 marks)

28. The figure below shows a rectangular tank (**A**) full of paraffin and bottle (**B**) which Apiyo uses to sell paraffin.

60 cm

A

15 cm

50 cm

B

1.5 Litres

(a) Calculate the volume of paraffin in the tank (**A**). *(02 marks)*

(b) Find the number of full bottles of size **B** Apiyo can obtain from the tank. *(03 marks)*

29. The interior angle of a regular polygon is 135⁰.

    (a)   Name the polygon.   *(03 marks)*

    (b)   Find the sum of all the interior angles of the polygon.

                                              (02 marks)

30. Abby, Allen and Alex shared some books in the ratio of 2:7:3 respectively such that Abby and Allen get 36 books altogether.

    How many books did each get?   *(05 marks)*
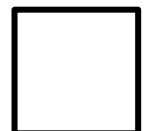
31. Bruno is 9 years older than Sharif. Their total age is 21 years.

(a) How old is each? *(03 marks)*

(b) After how many years will Bruno be twice as old as Sharif? *(02 marks)*

32. The graph below shows the number of apples a trader sold in 3 days. She sold 20 apples on Wednesday. Study the graph carefully and use it to answer questions that follow.

Days of the week	Apples sold
Monday	🍎 🍎 🍎 🍎 🍎
Tuesday	🍎
Wednesday	🍎 🍎 🍎 🍎 🍎

(a) On which day did she sell the highest number of apples? *(01 mark)*

(b)   How many apples did she sell on Tuesday?   *(01 mark)*

(c)   Calculate the number of apples the trader sold per day on average.   *(03 marks)*

END