

EDUCATION SOURCE EXAMINATION BOARD

PRE – PLE SET IV/V

2024

MATHEMATICS

Time Allowed: 2 hours 30 minutes

TARGET MARK

Random No.						Personal No.		

Candidate's Name:

Candidate's Signature:

District ID:

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Read the following instructions carefully:

1. Do not write your **school** and **district name** on this paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions.
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"

FOR EXAMINERS' 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		

SECTION A: (40MARKS)

Question 1 to 20 carry two marks each

1. Work out: $75 - 33$

2. Collect like terms and simplify: $8m + 7n - 3m + 9n$

3. Workout: $1\frac{1}{4} - \frac{1}{2}$

4. Round off 998761 to the nearest ten thousand.

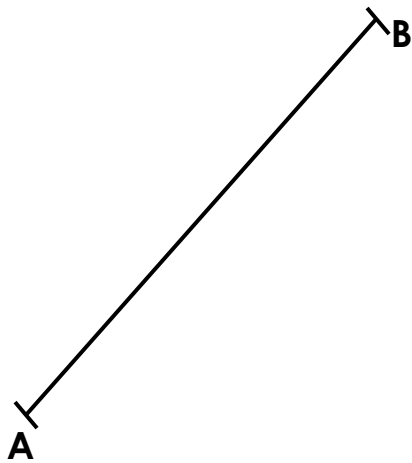
5. Convert 0.94 litres to cm^3 .

6. Workout:

$$\begin{array}{r} 212_{\text{five}} \\ +42_{\text{five}} \\ \hline \end{array}$$

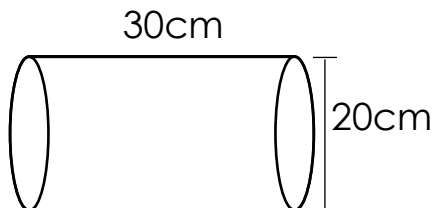
7. If today is Tuesday, what day of the week was it 50 days ago?

8. Using a ruler, a pencil and a pair of compasses only, bisect the line segment **AB** below.



9. Express 36 as a product of its prime factors.

10. Find the volume of the cylinder below. ($\pi = 3.14$)



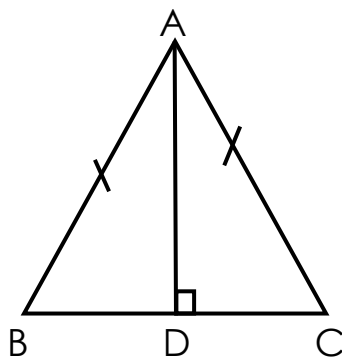
11. 12 men take 20 days to weed a garden. How many days will 16 men take to weed same garden?

12. Given that set **A** = {d, e, f}, set **B** = {e, f, h, p, w} and **E** = {d, e, f, h, p, w, m, k}. Find $n(A - B)$

13. Ms. Mugisha bought 4 cocks at sh. 140,000. At what price must she sell each in order to get a profit of sh. 12,500 on each cock?

14. Moses slept at 9:55pm and woke up at 11:15p.m. How long was he sleep?

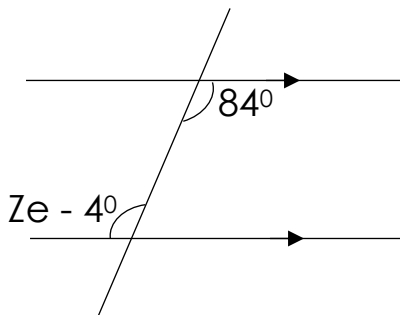
15. The figure below is of a triangle; length AB = 17cm and BC = 30cm. Find length AD.



16. Solve the inequality: $3m + 5 < 11$

17. The bursar has a bundle of twenty thousand shillings numbered consecutively from P8731167 to PQ8731194. How much money does he have?

18. Find the value of **e** in the figure below.



19. The LCM of two numbers is 72 and their GCF is 6, find the second number if the first number is 18.

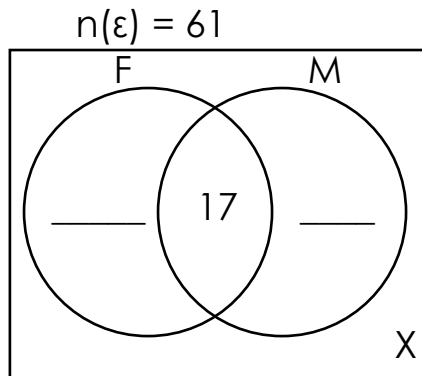
20. Hamida borrowed sh. 120,000 from a SACCO at a simple interest rate of 10% per annum. Find the time she spent with the money if she paid an interest of sh. 240,000.

SECTION B (60 MARKS)

21. In a class of 61 pupils, $(x + 8)$ eat fish (F) only, $(2x - 4)$ eat meat (M) only, 17 eat both types of sauce, x eat none of the two.

a) Complete the Venn diagram below.

(2 marks)



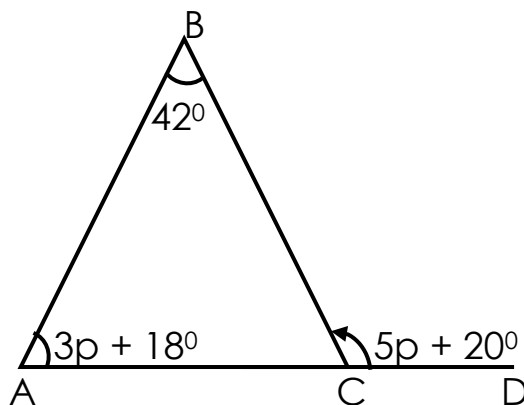
b) Find the value of x .

(2 marks)

c) How many pupils did not eat meat?

(2 marks)

22. Study the triangle below and use it to answer the questions that follow.



a) Find the value of P . (3 marks)

b) What is the size of angle ACB?

(2 marks)

23. Paul went to a market with sh. 35,000. He bought the items shown in the table below. After paying for all the items, he remained with sh. 8,200.

Complete the table.

Item	Unit cost	Total cost
2kg of sugar	sh. 4000	sh.....
.....loaves of bread	sh. 5,500	sh.....
3 litres of milk	sh.....	sh. 6,000
.....kg of salt	Sh. 1,200	sh. 1,800
TOTAL EXPENDITURE		sh.....

24. Mr. Ongom spent his salary as follows; 31% on fees, 29% on transport, 22% on food and saved the rest. If he saved sh. 360,000, how much did he spend on food? **(5 marks)**

25. a) Solve: $2^n \div 2^3 = 32$

(2 marks)

b) Write 0.0607 in standard form.

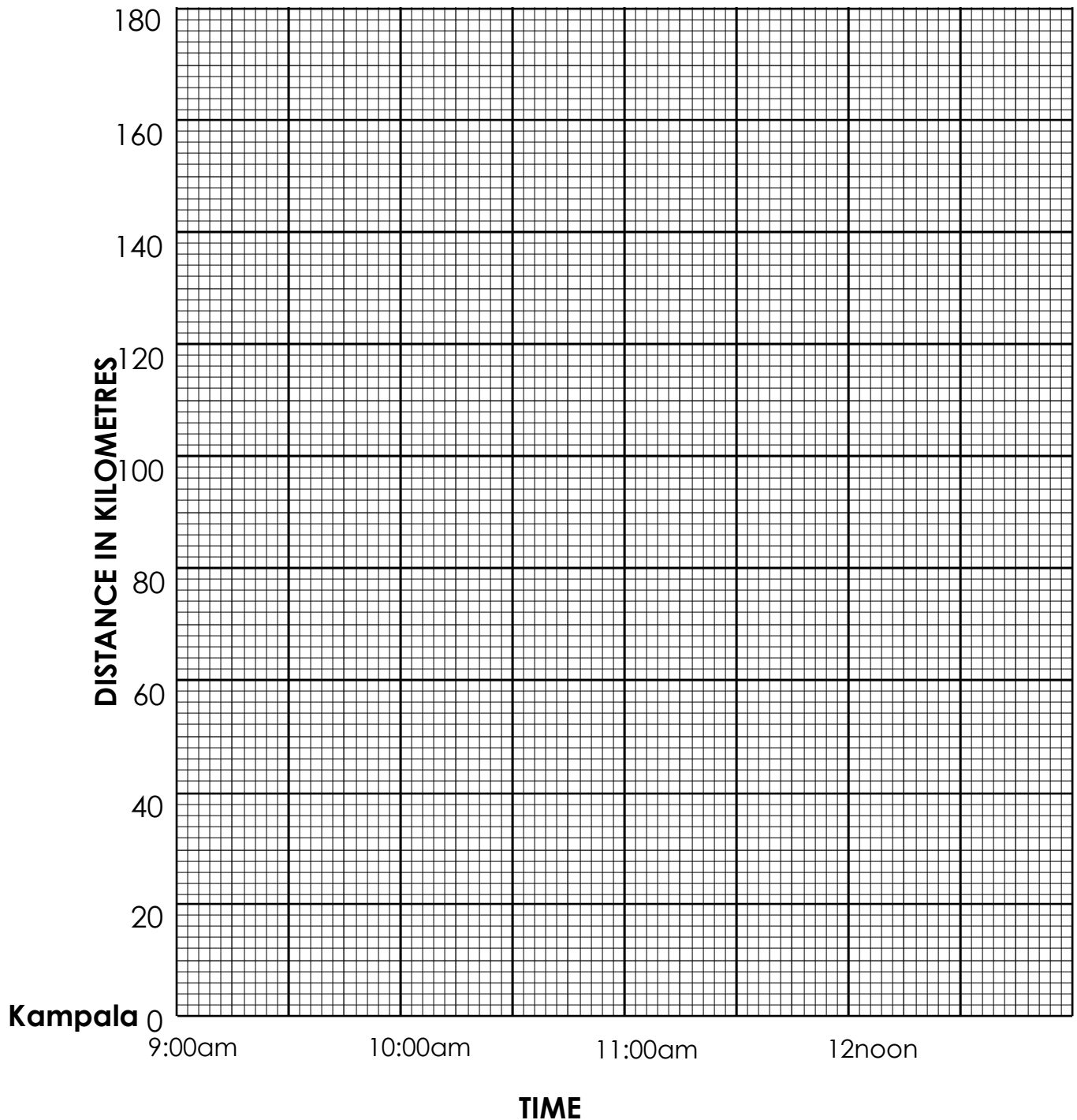
(2 marks)

26. A wooden box full of ceramic jugs weighs 22.3kg. The empty box weighs 3.4kg. How many jugs are in the box if each jug has a mass of 450g? **(4 marks)**

27. A motorist driving at 60km/hr left Kampala at 9:00am and took one hour to Mityana. He rested for 30 minutes, before continuing to Mubende at a steady speed of 50km for 2 hours.

a) Show the motorist's journey on the grid below.

(3 marks)



b) Calculate the motorist's average speed for the whole journey.

(2 marks)

28. a) Using a ruler, a pencil and a pair of compasses only, construct a triangle LMN where $\overline{MN} = 7.5\text{cm}$, angle LMN = 60° and angle LNM = 45° .

Drop a perpendicular from L to meet MN at X.

(5 marks)

b) Measure \overline{LX} .

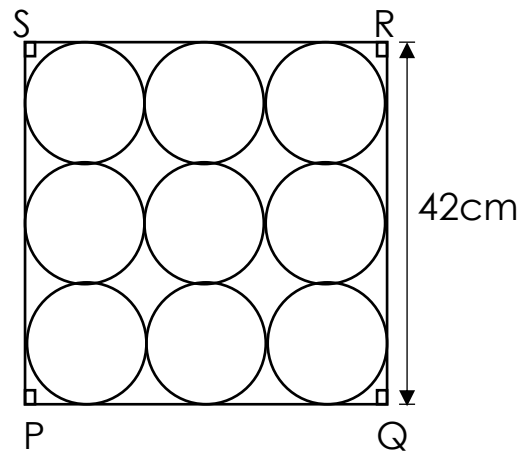
(1 mark)

29. A mother is twice as old as her son and thrice as old as her daughter. The total age of the daughter and the son is 40 years. Find the mothers age.

(4 marks)

30. A tank is $\frac{9}{10}$ full of water. When 420 litres are used it remains $\frac{3}{8}$ full. How many litres does it contain when it is $\frac{13}{16}$ full?

31. The figure shows circular plates cut from a square metallic sheet PQRS.



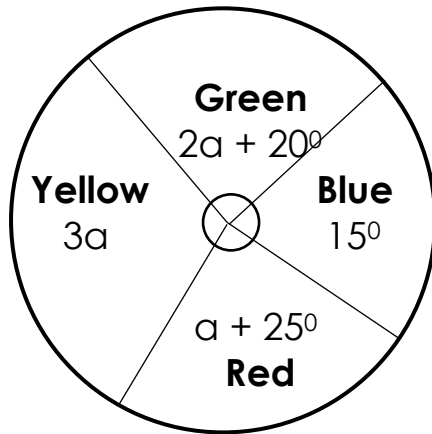
a) Find the area of the metallic sheet.

(2 marks)

b) Calculate the area of the metallic sheet that remained after cutting out the plates. ($\pi = \frac{22}{7}$)

(3 marks)

32. The circle graph below shows pupils in a class and the colours they belong to.



a) Find the value of a .

(2 marks)

b) If there are 60 pupils in green, find the number of pupils in blue.

(3 marks)

END