

THE PRIME SPECIAL EXAMINATIONS 2023

MATHEMATICS

Time allowed 2 hours 30 minutes

INDEX NO:	Random No.	Personal No.

PRIME CODE

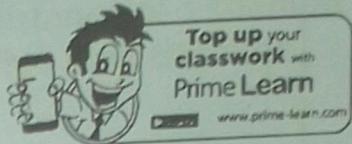
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Candidate's Name:

Candidate's Signature:

School Random No.

District ID:



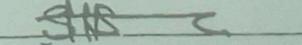
Read the following instructions carefully:

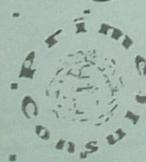
1. Do not write your school or district name anywhere on this paper.
2. This paper has **two sections: A and B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **9** printed pages.
3. Answer all questions. All the working for both sections **A** and **B** must 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 those boxes inside the question paper.

FOR EXAMINERS' USE ONLY

QUESTION NUMBER	MARKS ATTAINED	INITIALS
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

APPROVED:


Mathematics Department (PEC)



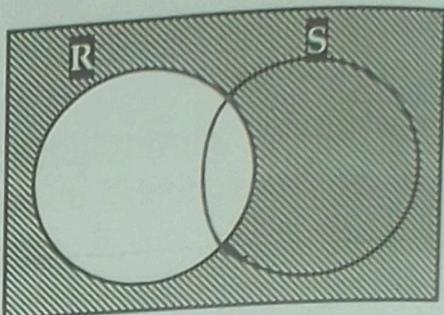
Kampala

Publishers of:-

**THE PRIME; SCHEMING FRAMEWORKS, HOLIDAY PACKAGES, LEARNING GAMES,
LESSON COURSE BOOKS AND PUPILS' WORKBOOKS**

Turn Over

Section A (40 Marks)

1	Workout: 754 $\underline{-532}$ _____	2	Write LIX in Hindu Arabic numerals.
3	Simplify: $8m+4n+5m+2n$	4	In the diagram below, describe the shaded region.
5	Round off 38.94 to the nearest whole number.	6	Using a pair of compasses, a sharp pencil and a ruler, bisect angle MNP
7.	Change 8kg grammes	8	 
			

9	Work out: $2 - 3 = \underline{\hspace{2cm}}$ (Finite 7)	10	A regular polygon has 8 sides. Find the size of its exterior angle.								
11	Find the next number in the sequence below; 1,3,6,11,18, <u> </u>	12	A bus covered a distance of 120km at a speed of 80km/hr. Find the time taken.								
13	Change 110_{two} to base ten.	14	The LCM of M and N is 30. Their G.C.F is 3. If N=15, find the value of M.								
15	Complete the table below correctly.										
<table border="1"> <thead> <tr> <th>Principal</th> <th>Rate per year</th> <th>Time</th> <th>Simple interest</th> </tr> </thead> <tbody> <tr> <td>sh. <u> </u></td> <td>8%</td> <td>3months</td> <td>Sh.4000</td> </tr> </tbody> </table>			Principal	Rate per year	Time	Simple interest	sh. <u> </u>	8%	3months	Sh.4000	
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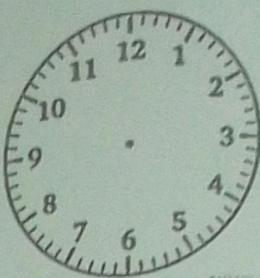
- 16 Kiggundu planted trees along a straight road. The trees were planted at an interval of 40 metres. If 26 trees were planted, how long was the road?

- 18 Solve and give a solution set if K is a whole number.
 $K + 7 > 4$

- 20 Use the equation $y = x + 1$ to complete the table.

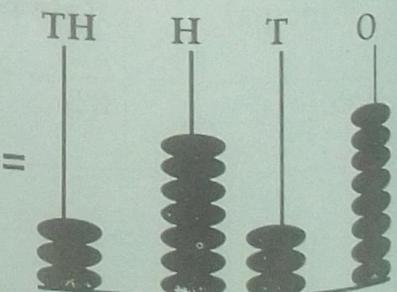
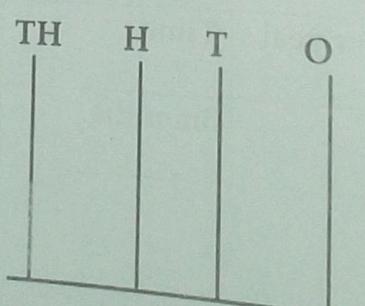
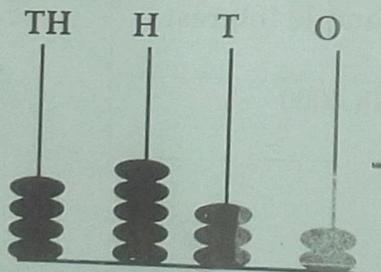
X	-3	_____	+2
y	_____	+1	+3

17 Show 20 minutes to 4 O'clock on the clock face below.



- 19 A trader bought an article at Sh. 40000 and sold it Sh. 48000. Calculate the trader's profit.

- 21 The diagrams below show subtraction of two numbers on the abacus. Study them and answer the questions that follow.



(a) Write down the number subtracted.

(02 marks)

(b) Complete the second abacus above.

(01 mark)

(c) Express the number subtracted in standard form.

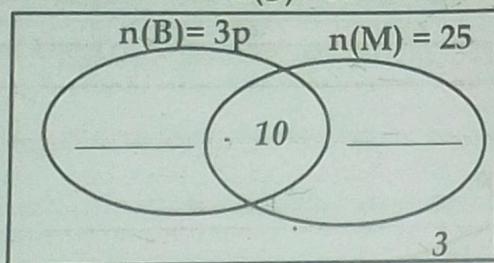
(02 marks)

- 22 In a village farming group of 60 members, 3p members grow beans (B) 25 members grow maize (M), 10 members grow both beans and maize while 3 members grow none of the two crops.

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

(02marks)

$$n(\Sigma) = 60$$



(b) Find the value of p.

(02 marks)

(01 mark)

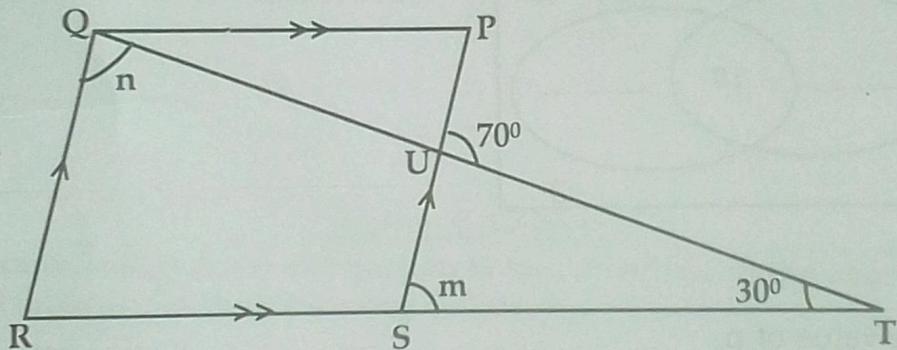
(c) How many farmers grow beans only?

(03 marks)

23 (a) Workout; $\frac{4.2 \times 0.7}{0.21}$

(b) Simplify; $0.87 + 0.35 - 0.28$ (02 marks)

24 PQRS is a parallelogram, line RST is a straight line. Angle STU = 30° and angle TUP = 70° .



(a) Find the value of m.

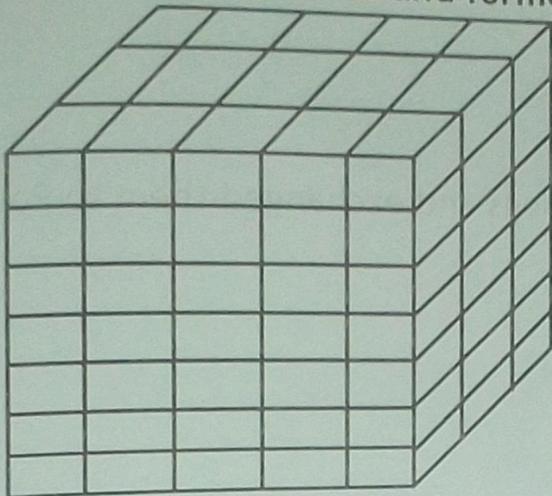
(03 marks)

(b) Find the value of n .

(02 marks)

25

Okello arranged square blocks and formed the shape shown below.



(a) How many blocks were arranged in the first layer?

(01 mark)

(b) Find the total number of blocks that were arranged to form the shape.

(02 marks)

(c) If each block measures 5cm in length. Find the volume of the shape formed after arranging all the blocks.

(02 marks)

- 26 At a forex bureau, the exchange rates for Uganda Shillings were as shown in table.

Currency	Buying rate	Selling rate
USA dollar (\$)	sh 3600	sh 3750
Pound sterling (£)	sh 4200	sh 4400
Kenyan shillings(Ksh)	sh 26	Sh 28

(a) A tourist had 450 U.S dollars and exchanged them to Ugandan shillings, how much money was he given? (02 marks)

(b) Kamadi had 264000 Kenyan shillings and exchanged them to Pound sterling, how many pounds was he given? (03 marks)

- 27 A driver drove from Soroti to Kumi at a speed of 90km/h for 40 minutes. He rested for 40 minutes. He continued his journey at a speed of 75km/h for 2 hours to Bukedea. If he used the same route back to Soroti taking him a total of $5\frac{1}{3}$ hours for the whole journey,

(a) Find the distance from Soroti to Bukedea. (02marks)

(b) Calculate his speed on the returning journey. (03 marks)

28

The table below shows marks scored by different pupils in an exam.

Marks	60	45	100	30
Number of pupils	3	2	1	4

(a) How many pupils did the test?

(02marks)

(b) Work out their mean score.

(03 marks)

29

(a) Express 250gm as a ratio of 2kg.

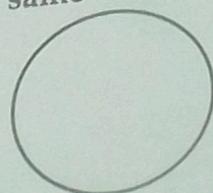
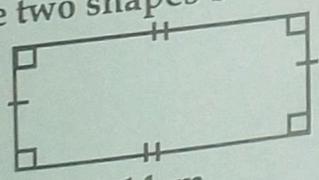
(02 marks)

(b) A worker's salary of sh.120,000 was increased in a ratio of 3:2. Calculate his new salary.

(03 marks)

30

The two shapes below have the same area.



(a) Calculate the area of the rectangle.

(02 marks)

(b) Find the circumference of the circle. ($\pi = \frac{22}{7}$) (03 marks)

31 (a) If $w = 5$ and $y = 6$. Find the value $wy + 3$ (02 marks)

(b) Solve: $n + \frac{3}{10}n + \frac{1}{2}n = 18$ (03 marks)

32 A boat sailed Westwards from X to Y a distance of 60km. It then changed its course and sailed on a bearing of 330° for 80km to Z.
(a) Using a scale of 1 cm = 10km, draw an accurate diagram to show the movement of the boat. (05marks)