



# The PRIME EXAMINATIONS 2023

## P.7 PRE - PLE MAGIC SET III

### MATHEMATICS

Time allowed 2 hours 30 minutes

INDEX NO:

Random No.

Personal No.



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Candidate's Name: .....

Candidate's Signature: .....

School Random No. ....

District ID: .....

#### READ THE FOLLOWING INSTRUCTIONS CAREFULLY

#### FOR EXAMINERS' USE ONLY

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

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.

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**APPROVED**

Consultant  
Mathematics Depa

Section A (40 Marks)

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1 Multiply:  $33 \times 3$

2

Express "Ninety thousand sixty" in figures.

3

Workout:  $\frac{2}{3} - \frac{1}{5}$

4

Find the next number in the series below.

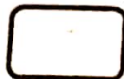
3, 9, 6, 12, 9, \_\_\_\_\_

5

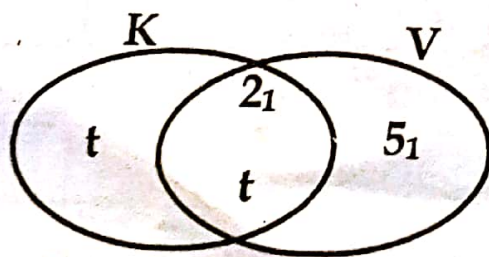
How many elements are in a set with 15 proper subsets?

6

If  $d = 7$  and  $n = 0.4$ , find the value of  $d - (n)^2$



Given that the L.C.M of K and V is 90. Find the value of t.





8

Using a sharp pencil, a ruler and a protractor only, draw an angle of  $60^\circ$ .

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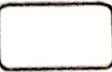
9	Write $(4 \times 1000) + (6 \times 100) + (1 \times 10)$ in short.	10	Solve: $11 - 3n = 5$
11	Workout: $2 \div 3 = \underline{\hspace{1cm}} \pmod{5}$	12	A motorist covers 210km in 5 hours. How long will he take to cover 336km?

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13	Express 08 : 15am in 24 hour clock system.	14	An article's price was reduced by sh.12000. Natukunda paid sh.36000. Find the marked price of the article.								
15	Stuart is the 7th and the 11th from either sides of the line. How many boys were in the line?	16	Calculate the size of the angle between East and South West through North.								
17	Convert 0.04 Hm to cm.	18	Find the value of 3 in 20307.								
19	Use the letter card below to find the probability of picking letter E at random. <table border="1"> <tr> <td>G</td><td>E</td><td>O</td><td>M</td><td>E</td><td>T</td><td>R</td><td>Y</td> </tr> </table>	G	E	O	M	E	T	R	Y	20	A wheel of radius 7cm made 18 revolutions. Calculate the distance covered.
G	E	O	M	E	T	R	Y				

(b) Calculate the area of the figure DQKJ.

(01 mark)



(a) Solve the inequality  $16 \leq -4(d - 1)$

(03 marks)

(b) Simplify:  $7f - 2(3 - f)$

(02 marks)

4 (a) Using a pair of compasses, a ruler and a sharp pencil only, construct a square in a circle of radius 4cm.

(04 marks)

(b) Measure one of its sides.

(01 mark)

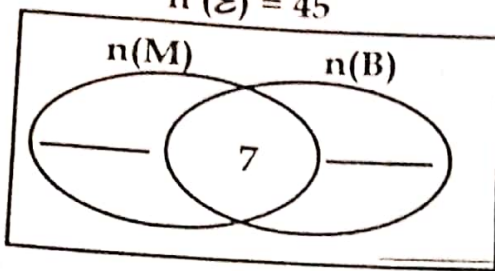


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In a class of 45 pupils, 15 eat Meat (M), 21 eat Beans (B) only while  $2d - 1$  eat neither of two kinds of sauce.

(a) Complete the Venn diagram below.

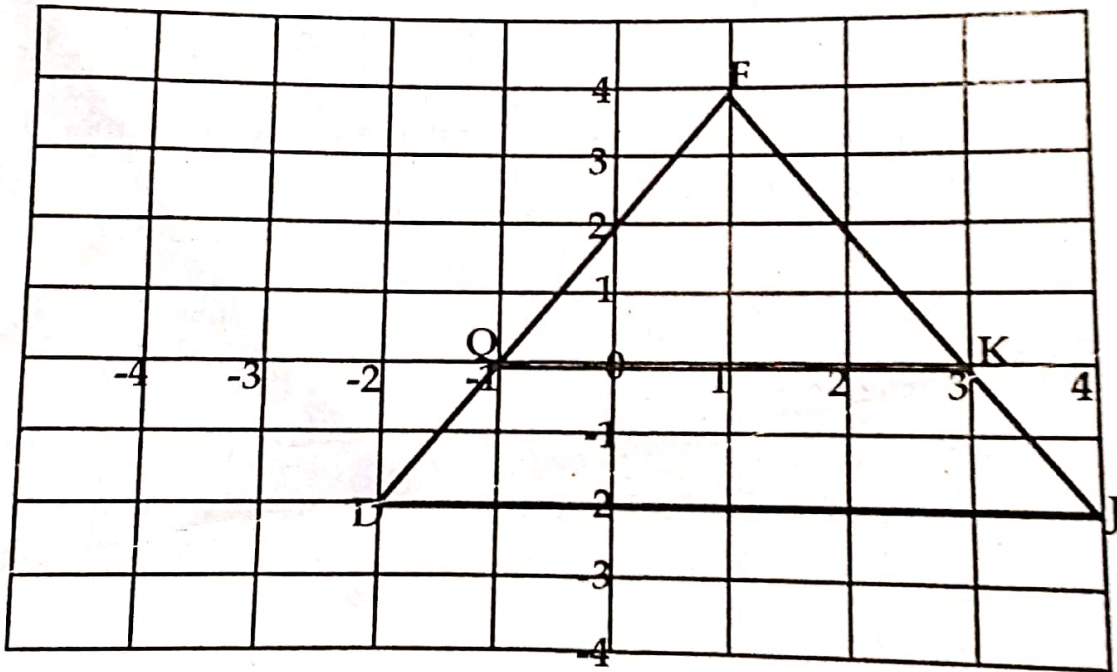
(03 marks)



(b) Find the value of  $d$ .

(02 marks)

22 Study the figure on the grid below and answer the questions that follow.



(a) Write the co-ordinates of points;

(i) D: \_\_\_\_\_

(ii) K: \_\_\_\_\_

(04 marks)

(ii) J: \_\_\_\_\_

(iv) F: \_\_\_\_\_

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25

(a) Given that  $100h = 34$  seven. Find the value of  $h$ .

(03 marks)

(b) Work out:

$$\begin{array}{r} 101_{\text{two}} \\ + 111_{\text{two}} \\ \hline \end{array}$$

(02 marks)

a) Complete the shopping bill table below correctly.

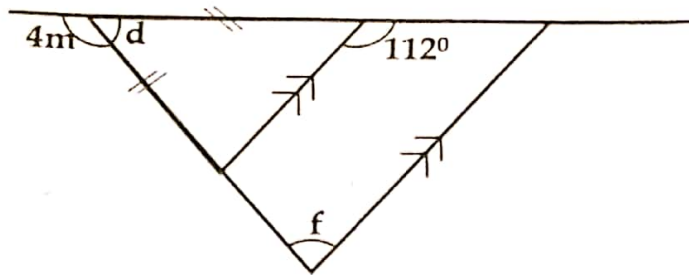
(03 marks)

Item	Quantity	Unit cost	Total cost
Beans	$1\frac{1}{2}$ kg	Sh. _____ per kg	Sh.9000:
Sugar	250gm	Sh.5000 a kg	Sh. _____
Cooking oil	_____ sackets	Sh.1750	Sh.5250

b) How much would one pay for 20 sackets of cooking oil?

(02 marks)

27 Study the figure below and find the value of unknown angles.



(a) Find the size of angle;

(i)  $d$  : (02 marks)

(ii)  $f$ : (01 mark)

(iii)  $m$  (02 marks)

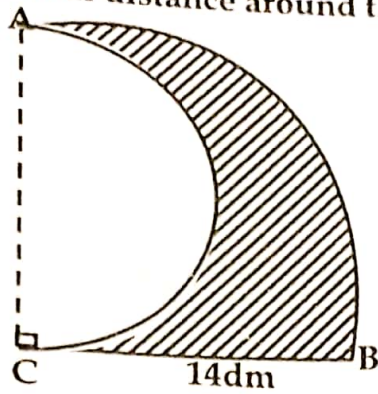
28 A worker spent  $\frac{1}{2}$  of his salary on rent,  $\frac{1}{8}$  on food and  $33\frac{1}{3}\%$  of the remainder on clothing and banked sh. 40,000. Calculate his total salary. (05 marks)



29

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(a) Calculate the total distance around the figure ABCA. (03 marks)



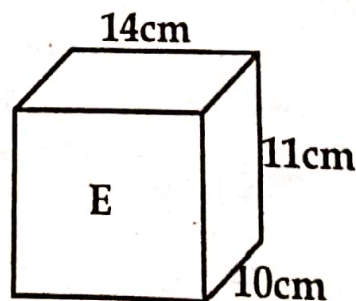
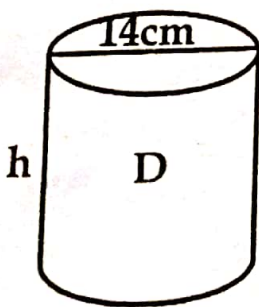
(b) Find the area of the shaded part. (03 marks)

30

A trader deposited sh. 600000 in a bank for a period of 9 months. If the money yielded an interest of sh.36000, calculate the interest rate per annum. (04 marks)

31

The two containers D and E hold the same amount of water when completely full of a liquid.



(a) Calculate the height of container D.

(02 marks)

(b) Find the volume of container E in  $\text{cm}^3$ .

32 A motorist covered a distance of 81km from 8:48am to 10:18am. Calculate his speed in m/s. (05 marks)

**REVISION TIP**

Make a plan and do some revision every day.