



The PRIME EXAMINATIONS 2023

P.7 PRE – PLE MAGIC SET III

MATHEMATICS

Time allowed 2 hours 30 minutes

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| INDEX NO: | Random No. | Personal No. |
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Candidate's Name:.....

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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:
Consultant
Mathematics Department (PEC)

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THE PRIME SCHEMING FRAME WORKS, PUPILS' WORKBOOKS, LESSON COURSE BOOKS,
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Section A (40 Marks)

1 Multiply: 33×3

2 Express "Ninety thousand sixty" in figures.

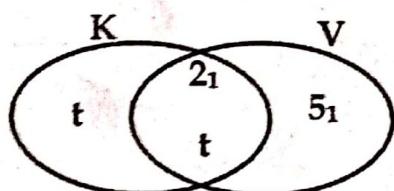
3 Workout: $\frac{2}{3} - \frac{1}{5}$

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 $d - (n)^2$.

7 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° .

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9 Write $(4 \times 1000) + (6 \times 100) + (1 \times 10)$ in short.

10 Solve: $11 - 3n = 5$

11 Workout: $2 \div 3 = \underline{\quad}$ (mod.5)

12 A motorist covers 210km in 5 hours. How long will he take to cover 336km

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

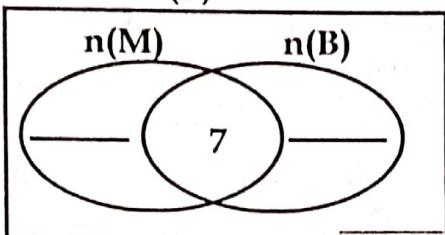
Section B (60 Marks)

- 21 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)

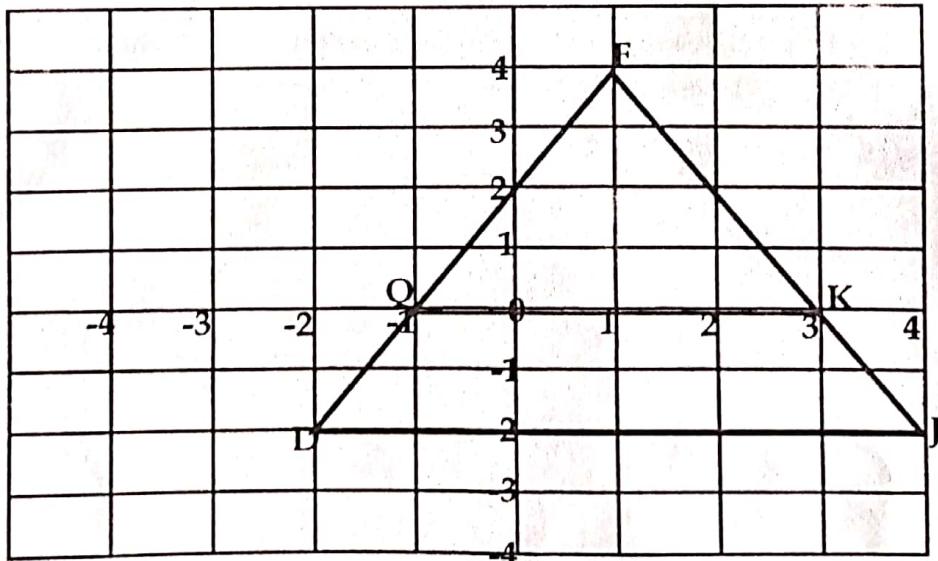
$$n(\mathcal{E}) = 45$$



(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;

(04 marks)

(i) D: _____

(ii) K: _____

(ii) J: _____

(iv) F: _____

(b) Calculate the area of the figure DQKJ.

(01 mark)

2. (a) Solve the inequality $16 \leq -4(d - 1)$ (03 marks)

(b) Simplify: $7f - 2(3 - f)$ (02 marks)

24 (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)

25 (a) Given that $100h = 34$ seven. Find the value of h. (03 marks)

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(b) Work out: 101_{two} (02 marks)

$$+ 111_{\text{two}}$$

26 a) Complete the shopping bill table below correctly. (03 marks)

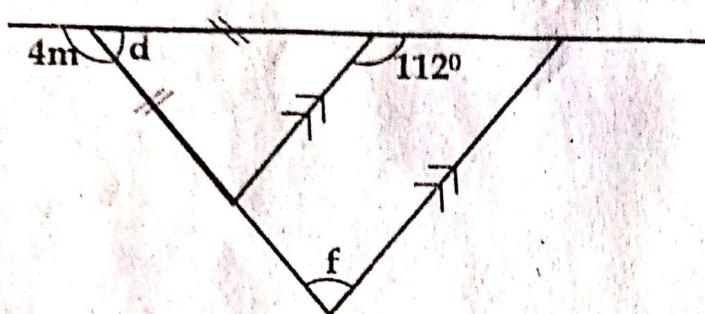
| Item | Quantity | Unit cost | Total cost |
|-------------|-------------------|------------------|------------|
| Beans | $1\frac{1}{2}$ kg | Sh. _____ per kg | Sh. 9000 |
| Sugar | 250gm | Sh. 5000 a kg | Sh. _____ |
| Cooking oil | _____ sacks | Sh. 1750 | Sh. 5250 |

b) How much would one pay for 20 sacks of cooking oil? (02 marks)

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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)

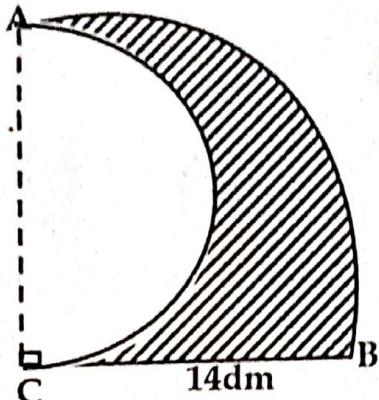
(iii) m (02 marks)

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

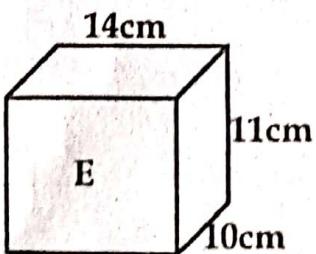
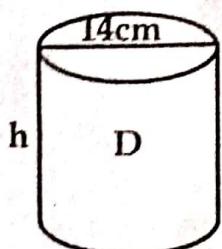
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- (b) Find the area of the shaded part. (03 marks)

- 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)

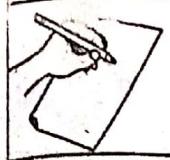
- 31 The two containers D and E hold the same amount of water when completely full of a liquid.



(a) Calculate the height of container D. (03 marks)

(b) Find the volume of container E in cm³. (02 marks)

- 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.