



# THE PRIME EXAMINATIONS 2024

## P.7 BEGINNING OF TERM I

### MATHEMATICS

Time allocated 2 hours 30 minutes



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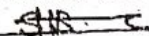
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#### READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This paper has two sections: A and B. Section A has 20 questions (40 Marks) and Section B has 12 questions (60 Marks).
2. Answer ALL questions. All the working for both sections A and B must be shown in the spaces provided.
3. All working must be done using a blue or black ball point pen or ink. Any work done in pencil other than on graphs and diagrams will not be marked.
4. No calculators are allowed in the examination room.
5. Unnecessary changes in your work and handwriting that cannot be read easily may lead to loss of marks.
6. Do not fill anything in the table indicated

| 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)

PUBLISHERS OF:-

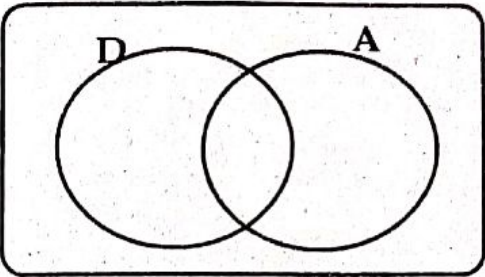
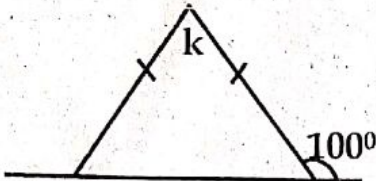
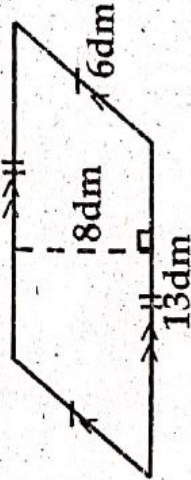
THE PRIME: SCHEMING FRAMEWORKS, PUPIL'S WORKBOOKS, LESSON COURSE BOOKS, HOLIDAY PACKAGES  
LEARNING GAMES, REVISION BOOKS, PLE ANALYSIS REPORTS AND MANY MORE



# Section A. (40 Marks)

|   |  |   |  |
|---|--|---|--|
| 1 | Subtract: $209 - 100$  | 2 | Write CDIII in Hindu Arabic numerals.      |
| 3 | Work out: $-3 + +5$  | 4 | Solve: $\frac{2d}{4} = 3$                  |
| 5 | Fill in the missing number in the series below.<br>4, 6, 8, __, 10, __ | 6 | Simplify: $\frac{36}{25} \div \frac{3}{5}$ |
| 7 | A cup costs sh.1500. Find the cost of 13 similar cups.                 | 8 | List down all the factors of 16.           |



|    |   |    |  |
|----|---|----|--|
| 9  | Change $304_{\text{five}}$ to base ten.   | 10 | Shade set A complement on the diagram below.<br> |
| 11 | Find the value of $k$ in the figure below.<br> | 12 | Expand $546.8$ using powers of ten.  |
| 13 | Divide: $2718$ by $9$ .   | 14 | If $n(D)=5$ , find the number of subsets in set $D$ .  |
| 15 | Workout the area of the figure below.<br>   | 15 | Workout the area of the figure below.  |



16

A motorist drove at an average speed of 40km/hr for  $\frac{1}{4}$  an hour. Calculate the distance he covered.

17 Workout:  $(189 \div 7) - (91 \div 7)$ .

18 Find the range of 4, 0, 6 and 2.

19 Convert 0.08km to m.

20 Express 8:18am in 24hr clock system.



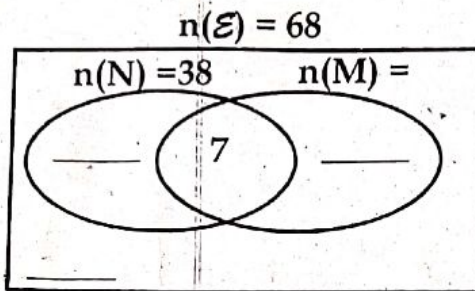
# Section B. (60 Marks)

21

At a party attended by 68 guests, 38 took Novida(N), 7 took both drinks served, 27 took Mirinda (M) only while p took neither of the two served drinks.

(a) Complete the Venn diagram below.

(03 marks)



(b) Find the value of p.

(02 marks)

22

(a) Elizabeth slept at 3:45pm and woke up at 10:45pm. For how long did she sleep?

(02 marks)

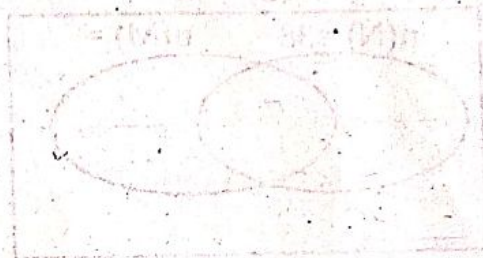
(b) Convert 5m/s to km/hr.

(03 marks)



23

Using a pair of compasses, a ruler and a sharp pencil only, construct triangle DFQ where by angle D=90°, line DF=7cm and line DQ =5cm. Measure line FQ. (05 marks)



24

(a) Simplify:  $\frac{3}{5} - \frac{1}{2} + \frac{1}{8}$

(03 marks)

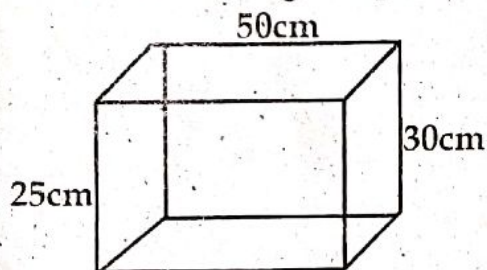
(b) 6 men take 18 days to construct a house. How long will 9 men take to construct the same house working at the same rate?

(02 marks)



25 Find the 3 consecutive odd numbers whose total is 45. (05 marks)

26 Below is a rectangular prism



(a) Calculate its volume. (02 marks)

(b) Find its capacity. (02 marks)

(c) How many vertices does the figure have? (01 mark)



(03 marks)

(a) Find the mean of 2k, 7, 0, 3 and 3k.

(02 marks)

(b) Workout the median of 13, 21, 5, 8 and 30.

28 Complete the shopping bill table below.

(05 marks)

| Item  | Quantity | Unit cost        | Total     |
|-------|----------|------------------|-----------|
| soap  | 3 bars   | sh. 4000 per bar | sh. _____ |
| sugar | _____ kg | sh.5000          | sh.10000  |
| salt  | 250gm    | sh.2000 a kg     | sh. _____ |
| Total |          |                  | sh. _____ |



29 Victoria is thrice as old as Mudoola. If their total age is 52 years, how old is each of them? (05 marks)

30 (a) Workout:  $342_{\text{five}} - 44_{\text{five}}$  (02 marks)

(b) Express  $25_{\text{ten}}$  as a base five numeral. (02 marks)

(c) Write the place value of 2 in  $112_{\text{five}}$ . (01 mark)



31

Given the numeral 3046.

(02 marks)

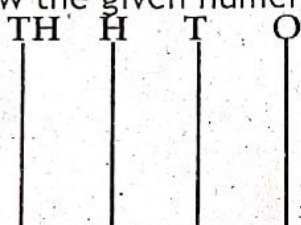
(a) Write the place value of 4 in the above numeral.

(b) Expand the given numeral using values.

(02 marks)

(c) Show the given numeral on an abacus below.

(01 mark)



32

Use the digits 3, 8 and 1 to form all the positive 3-digit numerals above.

(05 marks)