# The PRIME EXAMINATIONS 2023
## P.7 PRE – PLE TRIAL SET II
### MATHEMATICS

Time allowed 2 hours 30 minutes

**INDEX NO:**

| Random No. | | | | | | Personal No. | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Candidate's Name:...........................................................................................

Candidate's Signature:......................................................................................

School Random No. ..........................................................................................

District ID: ........................................................................................................

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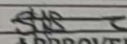## READ THE FOLLOWING INSTRUCTIONS CAREFULLY

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.

**PUBLISHERS OF:-**

### 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)

Turn Over

## Section A (40 Marks)

| | |
|---|---|
| **1** Workout: 24 x 2 | **2** Write 16013 in words. |
| **3** Simplify: -4 - -5 | **4** Find the next number in the sequence.<br><br>1, 8, 27, 64, _____ |
| **5** Solve: $2p - 3 = 7$ | **6** Given that set W has 32 subsets. How many elements does set W have? |
| **7.** Write 732.45 in expanded form using powers of ten. | **8** A trader bought a shirt at **sh.28,000** and sold it at a loss of **sh 4500**. Find the trader's selling price. |

| 9 | Change 15 cubic metres into cubic centimeters. | 10 | Work out: $2\frac{1}{4} - \frac{3}{5}$ |
|---|---|---|---|
| 11 | Express 10:40a.m into 24hour clock system. | 12 | What is the place value of 6 in $3120 \div 2$? |

13 | In a class of 60 pupils, 28 pupils are boys. Find the probability of picking a girl to become the class monitor?

14 | The diagram below shows the positions of two places. Use it to answer the questions that follow.
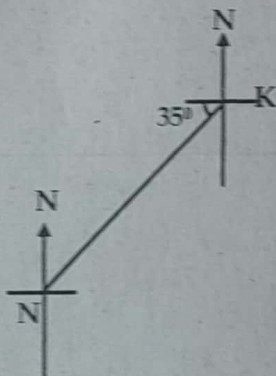


What is the bearing of N from K?

| | |
|---|---|
| 15. Give that P=4 and Q =-5, find the value of $PQ^2$. | 16. Suzan planted poles on both sides of a straight road of length **64m**. If the distance between the poles was 8m. How many poles did she plant altogether? |
| 17. The mean of ten numbers is 5.8. Nine of the numbers are 4, 5, 9, 3, 7, 6, 4, 6, 5. Find the tenth number. | 18. Below are the prime factors of two numbers.<br><br>$P = 2^3 \times 5^1$<br><br>$Q = 2 \times 2 \times 3 \times 5$<br><br>Find the G.C.F of the two numbers. |

19. Two men can complete work on a piece of land in **10 days**. How many less days will such 5 men require to complete the work on the piece of land?

20. Find the size of angle x in the figure below.



$70^0$     x
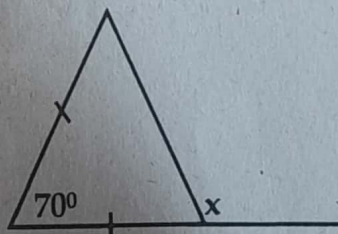
21 (a) Workout: $423_{five} - 214_{five}$. (02 marks)

(b) Given that $103p = 31_{six}$. Find the value of p. (03 marks)

22 Chemerimo went to the market and bought the following items.

2kg of meat at sh 12,000 per kg.
750gm of sugar at sh 3,600 per kg.
16 mangoes at sh 1,000 every 4 mangoes.

(a) Calculate the total cost of the items. (04 marks)

(b) If she was given a discount of sh 700, how much money did she pay for the items? (01 mark)

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PTO

23. In a class, x+14 pupils eat potatoes only, 23 pupils eat rice (R), 8 pupils eat both potatoes and rice while 4 pupils do not eat of the two food stuffs. Represent the above information on the Venn diagram below.  (03 marks)

n ($\varepsilon$) =

n(P)    n(R)

___  ___  ___

4
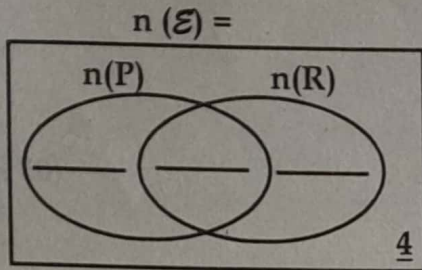
(b) If 34 pupils eat only one type of food stuff. Find the value of x.  (02 marks)

24. Wandindi left home at 6:00a.m for school which is 8km away. He cycled at a speed of 6km/hr. After cycling for 4km the bicycle had a puncture which took him 15 minutes to repair. He continues cycling at the same speed. At what time did he arrive at school?  (05 marks)

25. Study the figure below and answer the questions about it.
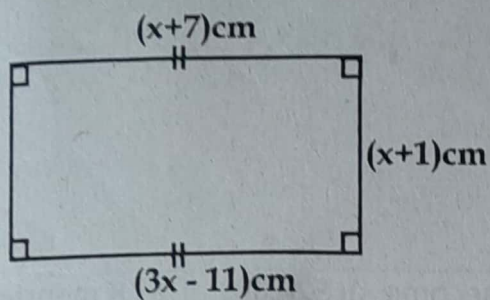


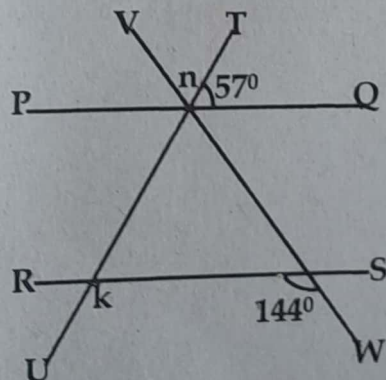(a) Find the value of **x**.                                    (02 marks)

(b) Find the perimeter of the figure.                          (03 marks)

26 In the figure below PQ is parallel to RS, UT and VW are straight lines.



(a) Find the value of **n**.                                    (02 marks)

(b) Find the value of **k**. (03 marks)

27. At what rate per annum will sh 480,000 become sh 520,000 after 8 months.
(05 marks)

28. Using a ruler, a pencil and a pair of compasses construct a parallelogram EFGH such that lines GH=7cm, HE = 5cm and angle GHE = 45°. (04 marks)

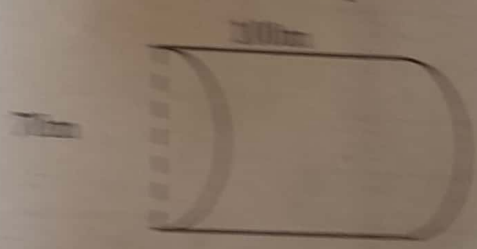(b) What is the length of a half the diagonal HF? (01 marks)

29. The figure below represents a piece of land.



What distance would be covered if one was to walk two times around it?

(3 marks)

31. In an election, 0.14 voted for candidate P, 0.02 voted for candidate Q while $\frac{2}{3}$ of the remaining people voted candidate R. The rest of the cast votes were declared invalid. If the valid votes were 108. Find the total number of people who voted. (05 marks)

32. On the grid below, plot the following points.
A(-3,-1) B(-1,+3) , C (3, 3) and D (1, -1).
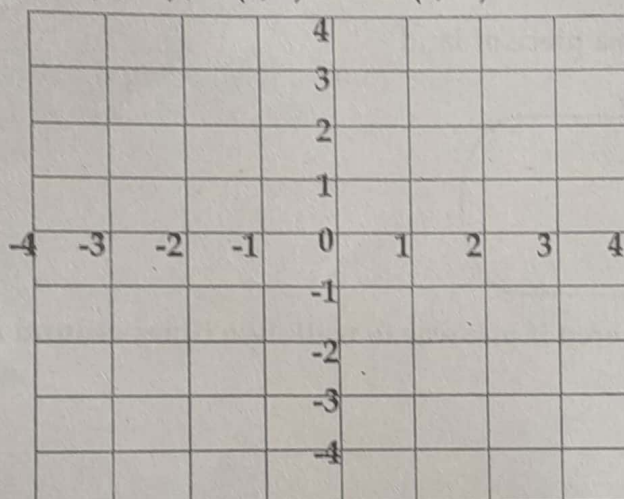
(b) Join A to B, B to C, C to D and D to A. (04 marks)

(c) Name the figure formed. (01 mark)

Revision tip
Master simple methods and use them regularly