



BROAD EXAMINATIONS®

P.7 PRE - MOCK 2023

MATHEMATICS EXAMINATION

Time allowed: 2 hours 30 minutes

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

Candidate's Name:

Candidate's Signature:

District Name:

Read the following instructions carefully:

1. This paper is made up of two sections: A and B.
2. Section A has 20 questions (40 Marks)
3. Section B has 12 questions (60 Marks)
4. Answer ALL questions in both sections A and B.
5. All answers must be written in the space provided in blue or black ball point pens and ink. Only diagrams should be done in pencil.
6. Unnecessary crossing of answers will lead to loss of marks.
7. Any handwriting, which cannot be easily read, may lead to loss of marks.
8. Do not fill anything in the boxes indicated for Examiners' use only.

Teacher's comment to the learner

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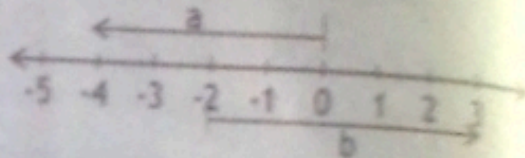
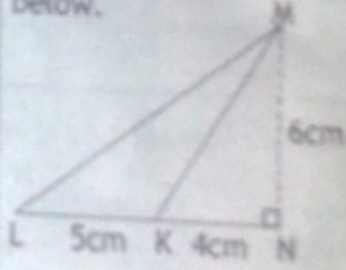
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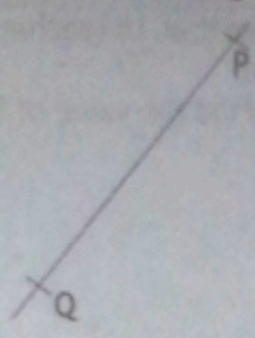


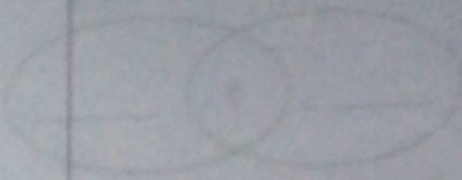
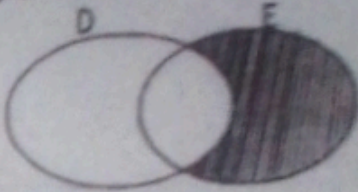
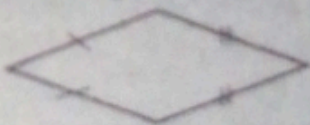
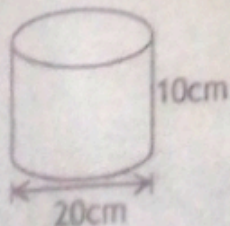
| PAGES | MARKS | SIGN |
|--------|-------|------|
| Page 2 | | |
| Page 3 | | |
| Page 4 | | |
| Page 5 | | |
| Page 6 | | |
| Page 7 | | |
| Page 8 | | |
| TOTAL | | |

Approved by:

Team Head Mathematics Department

SECTION A (40 Marks)

| | | | |
|----|--|-----|---|
| 1. | Work out: $\begin{array}{r} 28 \\ -14 \\ \hline \end{array}$ | 2. | Write 2014 in words. |
| 3. | Write the time shown below in words 11:45am | 4. | Without dividing, show if 5464 is divisible by 6 |
| 5. | Write "Nineteen thousand forty six" in figures. | 6. | What integers are shown by arrows a and b on the number line below?  a = b = |
| 7. | Add: Sh. 45000 + Sh. 7800 _____ | 8. | Set Y = {4, 7, 9, 10} and X = {1, 3, 4, 5, 6, 7}. Find $X \cap Y$ |
| 9. | Express 2023 in standard form. | 10. | Work out the area of triangle KLM below.  |

| | | |
|-----|---|--|
| 11. | <p>Using a ruler, a pencil and a pair of compasses only, draw a line through point K parallel to line PQ.</p>  | <p>12. Given that  represents a gross of books, how many books are shown below?</p>   |
| 13. | <p>Given that $y < 3$, find the solution set for the inequality.</p> | <p>14. Describe the shaded region in the diagram below.</p>  |
| 15. | <p>In the number list below, circle all cube numbers. 4, 8, 9, 31, 64, 100</p> | <p>16. A football match which took 90 minutes ended at 6:16pm. At what time did it start?</p> |
| 17. | <p>Work out: $\frac{3}{4} \div \frac{6}{7}$</p> | <p>18. How many lines of folding symmetry has the figure below?</p>  |
| 19. | <p>Work out the volume of the tin below.</p>  | <p>20. Divide: $1 \div 5 = \text{---} \text{ (Mod. 7)}$</p> |

SECTION B. (60 Marks)

| | | |
|-----|---|--|
| 21. | In a group of teachers, 15 teachers like football (F) only, 7 teachers like both football and music (M), P teachers like Music and 5 teachers like neither Music nor football. | (b) Given that 18 teachers like only one item; |
| (a) | <p>Complete the venn diagram below.</p> <div data-bbox="311 302 821 627"> <p style="text-align: center;">$\Sigma =$</p> </div> | <p>(i) Find the value of P.</p> <p>(ii) How many teachers like Music only?</p> <p style="text-align: right;">(5 Marks)</p> |
| 22. | <p>A woman bought a tray of 30 eggs at Sh. 11,000. On the way to her retail shop, 5 eggs fell off and got spoilt. She then sold the remaining eggs at sh. 600 each. How much profit did she get after selling all the remaining eggs?</p> <p style="text-align: right;">(4 Marks)</p> | |
| 23. | (a) Subtract 5.5 from 7.29 | <p>(b) Simplify: $\frac{0.63 \times 0.4}{0.9 + 7}$</p> <p style="text-align: right;">(5 Marks)</p> |

24. (a) Using a ruler, a pencil and a pair of compasses only, construct a rhombus ABCD where $BC = 5.5\text{cm}$ and angle $ABC = 60^\circ$.

(b) Measure diagonal BD.

(5 marks)

25. The table below shows the buying and selling of a United States dollar (US\$) and Kenya shilling (Ksh.) in Uganda shillings.

| CURRENCY | SELLING | BUYING |
|------------------|---------|--------|
| 1 US dollar | 3400 | 3200 |
| 1 Kenya shilling | 26 | 25 |

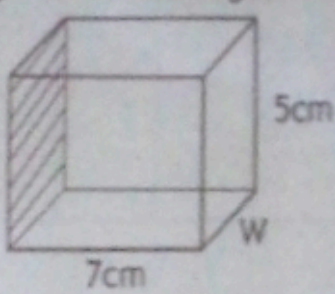
- (a) How much money in Kenya shillings can be exchanged for Ug sh. 520,000?

- (b) The cost of an item in Kenya is K.sh. 102,000, how much money in US dollars does the same item cost?

| | | | |
|---|---|-----|---|
| 26. A speeding car left station K at 9:50am and reached station L at 10:30am. | | | |
| (a) | What time did it take on the way? | (b) | If its average speed was 54km/hr, calculate the distance between the two stations in kilometers. |
| (4 Marks) | | | |
| 27. In a school of 1200 pupils, $\frac{3}{4}$ are boarders and the rest are day scholars. | | | |
| (a) | How many day scholars are in the school? | (f) | If $\frac{2}{3}$ of the day scholars are boys and $\frac{5}{9}$ of the boarders are girls, how many boys are in the school? |
| (6 Marks) | | | |
| 28. | (a) Jane was born in 45 BC and died in 15 AD. How old was she by the time she died? | (b) | Today is Wednesday. What day of the week was it 89 days ago? |

| | | |
|-----|----------------------------|---------------------------|
| 29. | (a) Solve: $2a^2 - 5 = 27$ | (b) $5 \cdot (K - 3) = 4$ |
|-----|----------------------------|---------------------------|

(6 Marks)

| | | |
|-----|---|--|
| 30. | <p>The total length of all the edges of the shaded part in the figure below is 26cm.</p>  | |
|-----|---|--|

| | | | |
|-----|----------------------|-----|--|
| (a) | Find the value of W. | (b) | Work out the total surface area of the cuboid. |
|-----|----------------------|-----|--|

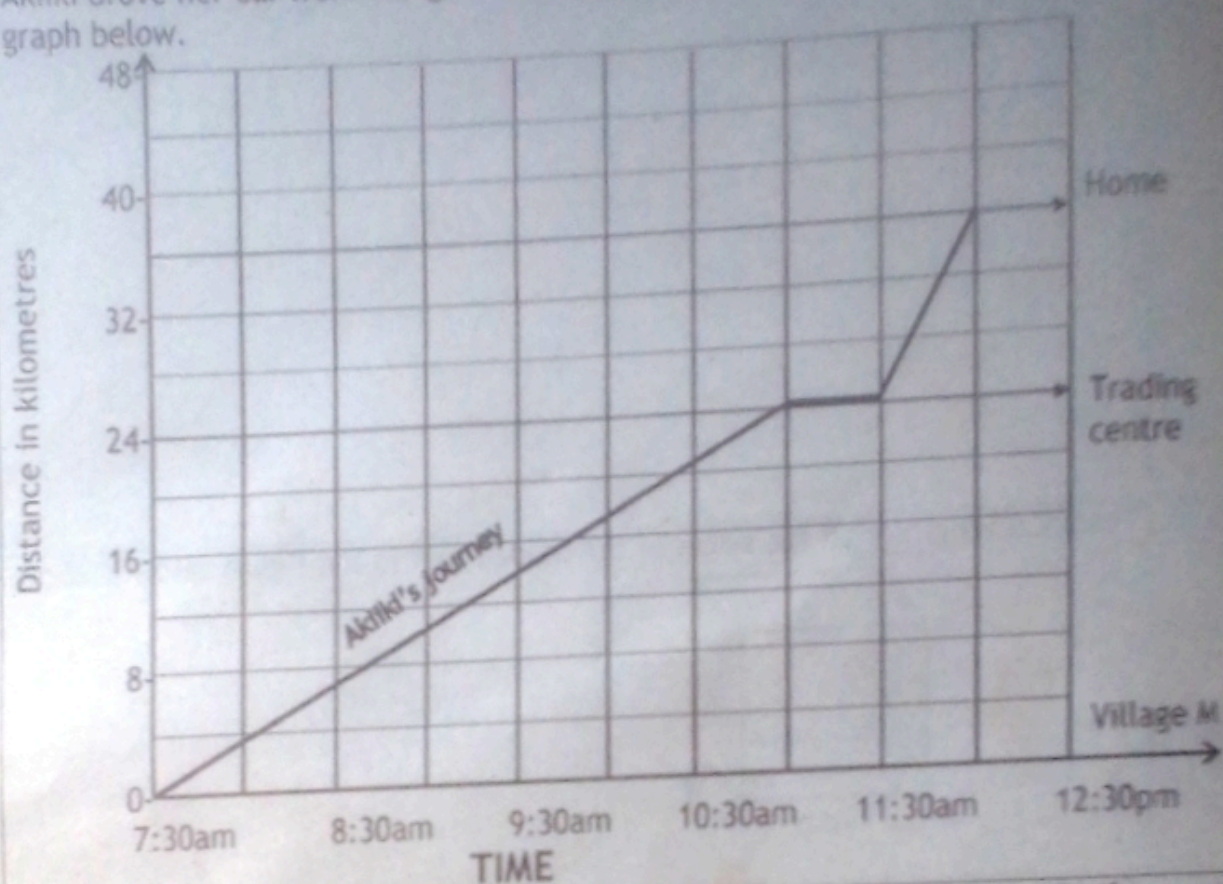
(5 Marks)

| | | | |
|-----|--|-----|---|
| 31. | (a) Find the sum of the 5 th odd number and the 9 th whole number. | (b) | Work out the product of all even numbers between 15 and 20. |
|-----|--|-----|---|

(4 Marks)

32.

Akiiki drove her car from village M via a trading centre to her home as shown on the graph below.



- | | | | |
|-----|--|-----|--|
| (a) | At what time did she leave the trading centre? | (b) | For how long did she wait in the trading centre? |
| (c) | How far is the trading centre from her home? | (d) | Calculate her average speed over the whole journey while travelling. |
- (6 Marks)