# THE ARIAL EXAMINATIONS®
# P.7 PRE-MOCK SET II 2023
# MATHEMATICS

Time allowed: 2 hours 30 minutes

Index No.

| *School Number* | | | | | | *Personal number* | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Name:_____

School: _____class_____

### *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 spaces provided
Using blue or black pens or Ink. Only diagrams
Should be done in pencil.

6. Unnecessary crossing of answers will lead to
Loss of marks.

7. Do not fill anything in boxes indicated for
Examiners' Use only.

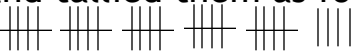| FOR EXAMINERS' USE ONLY | | |
|---|---|---|
| *page* | *Marks* | *Initials* |
| Page 2 | | |
| Page 3 | | |
| Page 4 | | |
| Page 5 | | |
| Page 6 | | |
| Page 7 | | |
| Page 8 | | |
| Total | | |

**Subject teacher's Comment to the learner**

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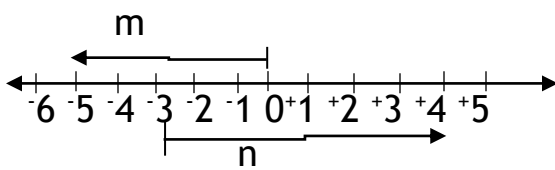
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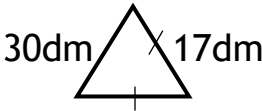...........................
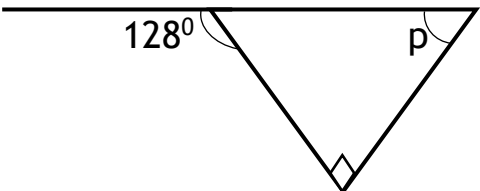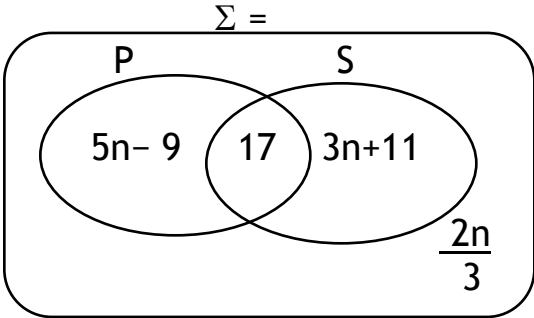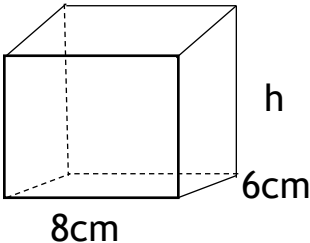
**Team Leader**

| 1. | Workout: 39 ÷ 3 | 2. | Write in figures: seven thousand, ninety eight. |
|---|---|---|---|
| 3. | Given that B= {t, e, c, n, o} and C = {c, a, s, t} Find n(BUC) | 4. | A trader counted tomatoes on his stall and tallied them as follows;<br>卌 卌 卌 卌 卌 \|\|\|\|<br>How many tomatoes did the trader count? |
| 5. | Change $3\frac{1}{4}$ hours to seconds. | 6. | Simplify: 9p – 4(1 + p) |
| 7. | A boy bought 7 books at sh. 28000.<br>How many books of the same kind can he buy with sh. 64000? | 8. | Obua packed 3.5kg of glucose in packets each weighing 50g. How many packets did Obua pack? |

| 9. | Use a ruler and a protractor to draw an angle of $75^0$ in the space below. | 10. | Find the next number in the sequence. 1, 7, 16, 28, _____ |
|---|---|---|---|
| 11. | Round off 967 to the nearest hundreds. | 12. | Workout: $(71×39) + (29×39)$ |
| 13. | Travelling at 54km/h, Juma covered a distance of 81km. Calculate the time the journey took him. | 14. | Write the integers represented by letters m and n on the number line below.

m

$^-6$ $^-5$ $^-4$ $^-3$ $^-2$ $^-1$ 0 $^+1$ $^+2$ $^+3$ $^+4$ $^+5$
n

(i) m_____
(ii) n _____ |
| 15. | Paul scored the following marks in a series of Science test. 53%, 59%, 64%, 51%, 61% and 63%. Find Paul's median score. | 16. | A tailor sells a pair of shorts at sh 12000. Find the cost of 18 similar shorts. |

| | | | |
|---|---|---|---|
| 17. | Find the size of angle p in degrees.  $128^0$    p | 18. | Write 1:4 as percentage. |
| 19. | Solve: 16 + 2k = 10 | 20. | Find the total distance around the shape below;  30dm    17dm |

| SECTION B (60 MARKS) |
|---|

**21.** At a general meeting parents were served with porridge (P) and Soda(S) as shown in the Venn diagram below. Study and use the Venn diagram to answer the questions that follow.

$\Sigma =$



P          S

5n– 9   ( 17 ) 3n+11

$\dfrac{2n}{3}$

| (a) If 53 parents were served with porridge, Find;<br>(i) the value of n          (02marks) | (ii) The total number of parents who attended the meeting.     (02marks) |
|---|---|

| | | | |
|---|---|---|---|
| | (b) Find the chance of picking a parent who did not take any drink to be the chairperson PTA.<br><br><br>(02marks) | | |
| 22. | (a) Express $\frac{6}{25}$ as a decimal fraction.<br><br><br>(02marks) | (b) | Simplify: $\frac{4}{15} + \frac{3}{7} \div \frac{9}{14}$<br><br><br>(02marks) |
| 23. | (a) Write the place value of 3 and 1 in $5301_{six}$<br><br><br>(02marks) | (b) | Workout: $42_{five} + 21_{five}$<br><br><br>(02marks) |
| 24. | The volume of rectangular prism below is 240cm$^3$<br>(a) Find the height of the prism. (03marks)<br><br>h<br>6cm<br>8cm | | |
| | (b) Calculate the total surface area. (T.S.A) (03 marks) | | |

| 25. | Study and complete Aine's shopping table below. | | | |
|---|---|---|---|---|
| | **Item** | **Quantity** | **Unit cost** | **Amount** |
| | Rice | 3kg | Sh _____per kg | Sh 15000 |
| | Sugar | _____kg | Sh 5000 per kg | Sh 7500 |
| | Cooking oil | 750ml | Sh 14000 per litre | Sh _____ |
| | Salt | $2\frac{1}{2}$ kg | Sh_____per kg | Sh 5000 |
| | Total expenditure | | | Sh_____ |

(05marks)

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**26.** Find the supplement of $82^0$

(02 marks)

(b) Find the size of angle x in degrees.
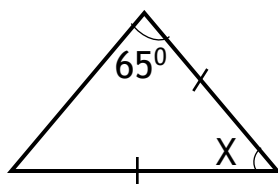


(03marks)

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**27.** In a certain test given in class, the marks scored, frequency and total marks are shown in the table below.

(a) Complete the table below. (03 marks)

| Marks scored | Frequency | Total marks |
|---|---|---|
| 40 | 3 | 120 |
| _____ | 7 | 350 |
| 60 | _____ | 540 |
| 70 | 4 | 280 |
| 55 | 2 | _____ |

| | |
|---|---|
| (b) | Calculate their arithmetic mean mark<br><br><br><br>(02marks) |

| 28. | At a party attended by 900 guests, $\underline{2}$ of them were females and the rest were<br>$\phantom{At a party attended by 900 guests, }5$<br>males. 20% of males and 40% of females were children. | | |
|---|---|---|---|
| (a) | How many males attended the party?<br><br><br><br><br><br>(02marks) | (b) | How many children were there?<br><br><br><br><br><br>(03marks) |

| 29. | |
|---|---|
| | (a) Use the number line to workout $^-3 - {}^+4$<br><br>$\longleftarrow \;\; ^-8 \; ^-7 \; ^-6 \; ^-5 \; ^-4 \; ^-3 \; ^-2 \; ^-1 \; 0 \; ^+1 \; ^+2 \; ^+3 \; ^+4 \; ^+5 \longrightarrow$<br><br>(03marks) |
| (b) | Workout 1 – 5 (finite 7)<br><br><br><br>(02marks) |

| 30. | (a) A string is 3 metres long. How many 75cm pieces can be cut from the string?<br><br><br><br><br><br>(03marks) | (b) | Find the length of the string in decimetres (dm)<br><br><br><br><br><br>(02marks) |
|---|---|---|---|

| 31. | (a) Solve: $\dfrac{3x}{5} = 9$ | (b) | Owen is 6 years younger than Annitah. If their total age is 34 years, how old is Annitah now? |
|---|---|---|---|
| | (02marks) | | (03marks) |

32. Using a ruler, a pencil and a pair of compasses only.
(a) Construct a triangle DEF such that DE=10cm, EF= 8cm and DF= 6cm

(04marks)

(b) Measure angle DFE_____

(01mark)

**END**