# THE ARIAL EXAMINATIONS®
# P.7 MATHEMATICS EXAMINATION
## PRE-PLE SET IV TERM III-2022 (Abridged Curriculum)

**ARIAL** Examinations Board

### *Time allowed: 2 hours 30 minutes*

| School No. | | | | | | Personal number | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Candidate's Name: _____

Candidate's Signature _____

District Name: _____

*Read the following Instructions carefully:*

This paper is made up of two sections: A and B.

1. Section A has 20 questions (40 marks).

2. Section B has 12 questions (60 marks).

3. Answer ALL questions in both sections A and B.

4. All answers must be written in spaces provided Using blue or black pens or Ink. Only diagrams Should be done in pencil.

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

6. Do not fill anything in boxes indicated for Examiners'Use only.
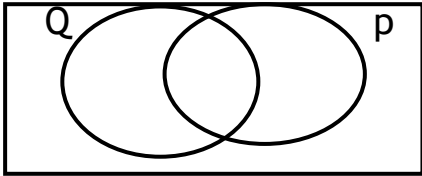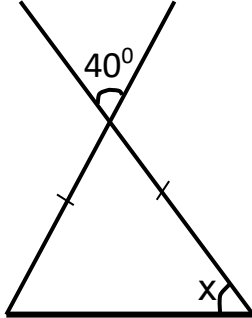
### Subject teacher's Comment to the learner

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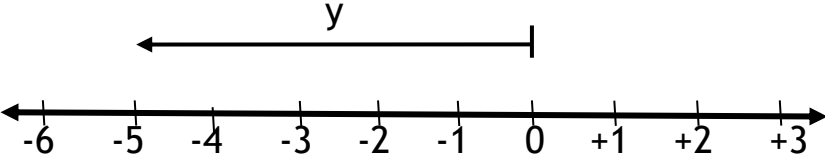
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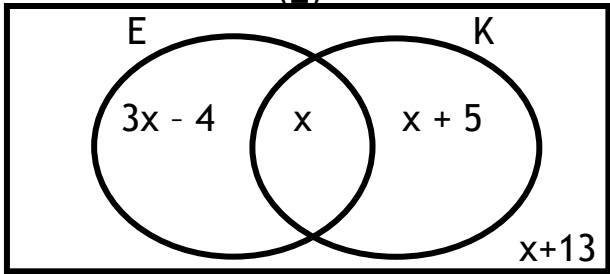
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**Team Leader**

## SECTION A: 40 MARKS

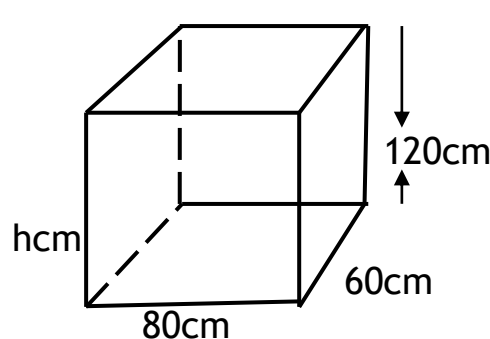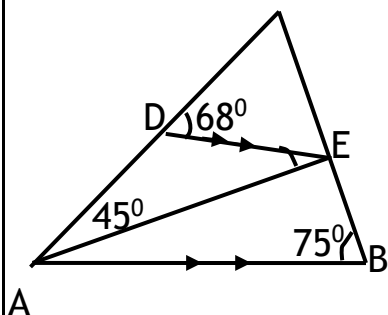| | | | |
|---|---|---|---|
| 1. | Work out: 32 x 32 | 2. | Write XLIV in Hindu Arabic numerals |
| 3. | Simplify: 5 – 4(1-k) | 4. | Find the next number in the sequence: 60, 50, 55, 46, 30_____ |
| 5. | Work out: (12 x 4) – (4 x 25) | 6. | In the venn diagram below, shade the complement of Set(p–Q)  |
| 7. | What percentage of 2 metres is 80cm? | 8. | Find the value of the digit in hundred thousand place value in the number 7,894,562 |
| 9. | The perimeter of a semi-circle is 36 metres. Find its diameter. | 10 | *In diagram below, **find the size of angle $x$ in degrees**.*  |

| 11. | A motorist took 50 minutes to cover a distance of 45km. Calculate the motorist's speed. | 12. | 3 counter books cost sh. 10,500. How many counter books can be bought for sh17,500? |
|---|---|---|---|

*Use the numberline below to answer the questions that follow.*

y

-6  -5  -4  -3  -2  -1  0  +1  +2  +3

| 13. | (a) Identify the integer down by arrow y above. | (b) State the absolute value of integery. |
|---|---|---|

| 14. | 10 men take 12 days to do a piece of work. How many men working at the same rate do the same piece of work in 8 days? | 15 | A trader banked shs. 3 million in a SACCO if he banked 20,000 shilling notes only how many notes did he bank? |
|---|---|---|---|

| 16. | Using a rulers, a pencil and a pair of compasses only, construct an angle of $150^0$ in the space below. | 17. | 250g packets of tea leaves were packed from a 7.5kg tea leaves bag. How many packets were packed? |
|---|---|---|---|

| 18. | Alexa will celebrate her birthday next week. What is the probability that Alexa will celebrate? |
|---|---|

| | | | |
|---|---|---|---|
| 19. | Express 10 m/s as Km/h | 20. | Solve: $\frac{2P}{5} - 3 = 7$. |

### SECTION B: 60 MARKS

**21.** The Venn diagram below shows the number of people who can speak Kiswahili (K), English (E) and other language in certain. Use it to answer the questions that follow.



$n(\Sigma)=$

E: $3x - 4$    $x$    K: $x + 5$    $x+13$

(a) If 49 people cannot speak Kiswahili, find the value of x. (02 marks)

(a) How many people cannot speak English? (02 marks)

(a) Find the probability of randomly selecting a member who can speak English to be the chairperson? (02 marks)

**22.** (a) Write 0.087 in standard form (02 marks)

(b) Solve $2^{2x} \times 2 = 32$

| 23 | (a) Today is Thursday. What day of the week was it 23 days ago?   (2mks) |
|----|---|
| | (b) When marking a test of questions, a teacher awarded 4 marks for every correctly answered question and deducted 2 marks for every wrongly answered questions. How many questions were correctly answered by pupil who scored 58 marks?      (04marks) |
| 24 | Complete the base three addition table below.                    (4mks) |
| 25 | (a) Simplify:  $\dfrac{1.24 \times 3.06}{0.4 \times 0.31}$                              (03mks) |
| | (b) Kirstine was given $\frac{4}{5}$ of the sugarcane. She gave $\frac{3}{8}$ of her share to faith. What fraction of sugar cane did Kirstine remain with?      (02 marks) |

Base three addition table (Question 24):

| + | 0 | 1 | 2 |
|---|---|---|---|
| 0 | 0 | 1 | _____ |
| 1 | 1 | 2 | _____ |
| 2 | 2 | _____ | _____ |

| 26 | The rectangular tank shown below contains water of capacity 432 litres |
|---|---|
| | 
120cm
hcm
60cm
80cm |
| | (a)  Find the height(h) of the water contained in the tank.          (03 marks) |
| | (b) Calculate the capacity of the water that completely make the tank full.(3mks) |
| 27 | A boy went to the market and bought the following items
3 T-shirt at 8000 each.
2 belts at sh 5000 A belt
$1\frac{1}{4}$ dozens books at sh. 1200 a book
If the boy was allowed a cash discount of 5%, calculate the boy's actual pay.
(5mks) |

| 28 | *In the triangle ABC, line AB is parallel to line DE. Answer the questions that follow.* **Find the size of angle AEB   (04mks)** |
|---|---|



| 29 | In a school, $\frac{12}{25}$ of them are boys the rest are girls 60% of the boys are boarders and 20% of the boys girls are day scholars. If 148 pupils in the school are day scholar, find the number of pupils in the whole school?                    (05MKs) |
|---|---|

| 30 | The time table below shows the route taken by bus |
|---|---|

| Station | Arrival time | Departure |
|---|---|---|
| a | ……… | 6:00am |
| b | 7:00am | 7:15am |
| c | 10:00am | 10:30am |
| d | 1:00pm | 1:30pm |
| e | 6:45pm | …………. |

(a) Express the time at which the bus leaves D in a 24 hour clock.     **(02mks)**

| | |
|---|---|
| (b) For how long does the bus stay at station C? (01mk) | (c) How long does the bus journey from station A to E take? (02mks) |

| | |
|---|---|
| 31 | Julius will 55year old and Joshua is 15 years. After how many years will Julius be twice as old as Joshua will be? **(04mks)** |

| | |
|---|---|
| 32 | Using a ruler, a pencil and a pair of compasses only, Construct a triangle DEC in which DE=6.4cm, angle DEC=60° and angle EDC=45°. Drop a perpendicular line from point C to meet line DE at K. (05MKs) |
| | (b) Measure the length CK **(01mk)** |

END