THE ARIAL EXAMINATIONS®
P.7 MATHEMATICS EXAMINATION
PRE-PLE SET V 2022 (Abridged Curriculum)

Time allowed: 2 hours 30 minutes

Index No.

		Random No.				Personal number		

Candidate's Name:_____

Candidate's Signature _____

School Random number: _____

District No. :

Read the following Instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.

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

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

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

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

6. All answers must be written in spaces provided using blue or black pens or Ink. Only diagrams should be done in pencil.

7. Unnecessary crossing of answers will lead to loss of marks.

8. Do not fill anything in boxes indicated for examiners' Use only.

FOR EXAMINERS' USE ONLY		
page	**Marks**	**Initials**
1-5		
6-10		
11-15		
16-20		
21-22		
22-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

PLE TIP 2022

Don't be afraid to ask your teachers for help. They will be glad to assist

Approved by

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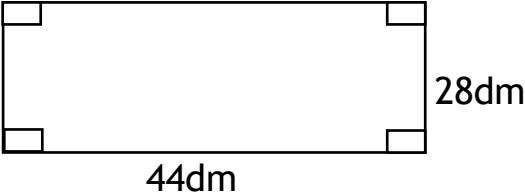
Team Leader

WE WISH YOU SUCCESS IN YOUR PLE
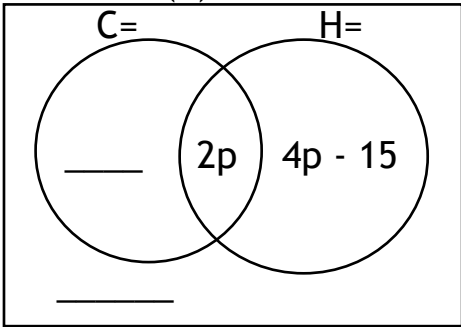
SECTION A (2 MARKS EACH)

1.	Work out: 398 − 156.	2.	Write in figures: Eighty thousand, Fifty.
3.	Simplify: -8 − -5	4.	Find the next number in the sequence; 1,2,6,15,31,_____
5.	Draw beads for 3046 on the abacus below. TH H T O	6.	Write $12\frac{1}{2}\%$ as a simplified common fraction

7. In the diagram below, find the size of angle $\mathcal{K}$ in degrees.

8.	Given that x = 7 and y = 6. Find the value of $y(x-y)^2$.

9.	Set R = {w,i,n}. How many subsets are in set R?	10.	7 metres of a cloth are used to make 22 shirts. How many metres of the same cloth are needed to make 110 shirts of the same size?

11.	Round off 78.952 to the nearest tenths.	12.	A rectangular sheet below was curved to form a cylindrical hollow. 28dm 44dm Find the radius of cylindrical hollow formed. $(Take\ \pi\ as\ \frac{22}{7})$
13.	Work out: 1 ÷ 6 (Finite 7)	14.	Write 0006 hours in a 12 hour clock.

15. Using a ruler, a pencil and a pair of compasses only, bisect the line segments WF = 7cm

16. A motorist covered a distance of 50km in 1 hour 30 minutes. How long can it take the motorist to cover 45km at the same speed?

17.	Simplify: $m^8 \times m^{-7}$	18.	Water and milk are mixed in the ratio of 5:2 to make tea for a party. How many litres of milk are mixed with 100 litres of water?

| 19.	On an immunization day, weights for babies were taken as below; 4kg, 3kg, 6kg, 5kg, 7kg and 5kg. Find the median weight of the babies	20.	A container full of milk powder weighs 260g and when a third full, it weighs 100g. Find the weight of the empty container.

SECTION B: 60 MARKS

21.	In a health survey conducted in adults of a certain village, (4p – 15) were immunized against Heppatitis (H) only, 2p were immunized against both Hepatitis and COVID19 (C), (3p + 10) were immunized against COVID 19 but not Hepatitis while (p + 5) were not immunized at all. Complete the venn diagram below using the above information. (2mks)

$n(\Sigma)=$

C=   H=

_____ (2p) 4p - 15

_____

b) Given that the adults immunized against both diseases were two more than those that were not immunized at all, find the value of p (2marks)

(c) Find the probability that the adult picked at random was immunized against both diseases. (2marks)

22.	State the place value of 4 in 2435_{six}. (1mark)

(b) Change 534_{six} to octa system (3marks)

23. The figure below shows two semi circles with centres O and C respectively. Answer the questions that follow if $\overline{OA}$ = 14cm
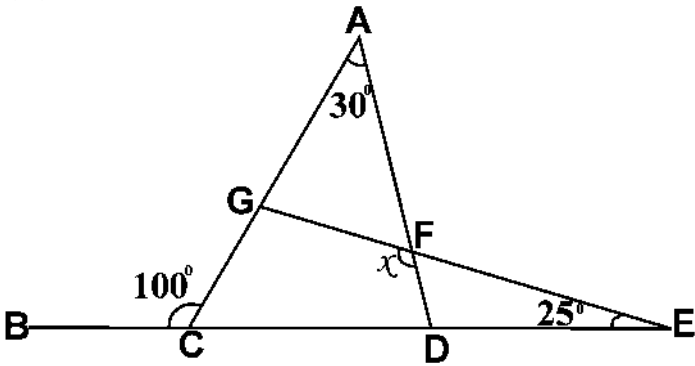
(a) Find the area of the figure below.   (3marks)   (Take π as $\frac{22}{7}$)

14cm

A

O   C   B
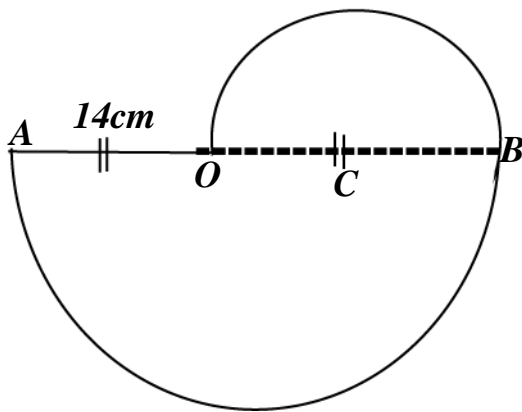
b)   Workout the distance around the figure. (3marks)

24.   (a)Solve: $\frac{p+3}{2} = \frac{2p-1}{3}$ (2marks)

(a)Solve and state the solution set for,
$16 > 5y + 1 \geq 6$ (3mks)

25.	Atwine filled a cylindrical tank whose diameter is 40cm and height 140cm with a fruit juice. If he sells it at sh 1000 per half litre, how much money will he get? (use $\pi \ as \ \frac{22}{7}$) 5marks
26.	Find the difference in the value of 9 and the value of 4 in the number 7458.629.(4marks)
27.	(a) Name the regular polygon whose each exterior angle measures 30^0. (2marks)

(b) **In the diagram below, find the size of angle x in degrees. (3marks)**

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28.	The table below shows the scores of some candidates in a mathematics test.

28. The table below shows the scores of some candidates in a mathematics test.

(a) Complete the table below. (3marks)

Score(%)	Pupils	Total score
70	/	70
90	_____	180
80	|||	_____
	////	240

(b) Calculate their mean score. (2marks)

29. A teacher spends 20% of his monthly salary on rent, 25% on food, $\frac{5}{9}$ of the remainder on fees and saves sh 110,000. Calculate the teacher's monthly salary. (5marks)

30. Using a ruler, a pencil and a pair of compasses only,

(a)Construct a triangle GAT in which GA = 6.8cm, angle TGA = 75^0 and angle GAT = 60^0. (4marks)
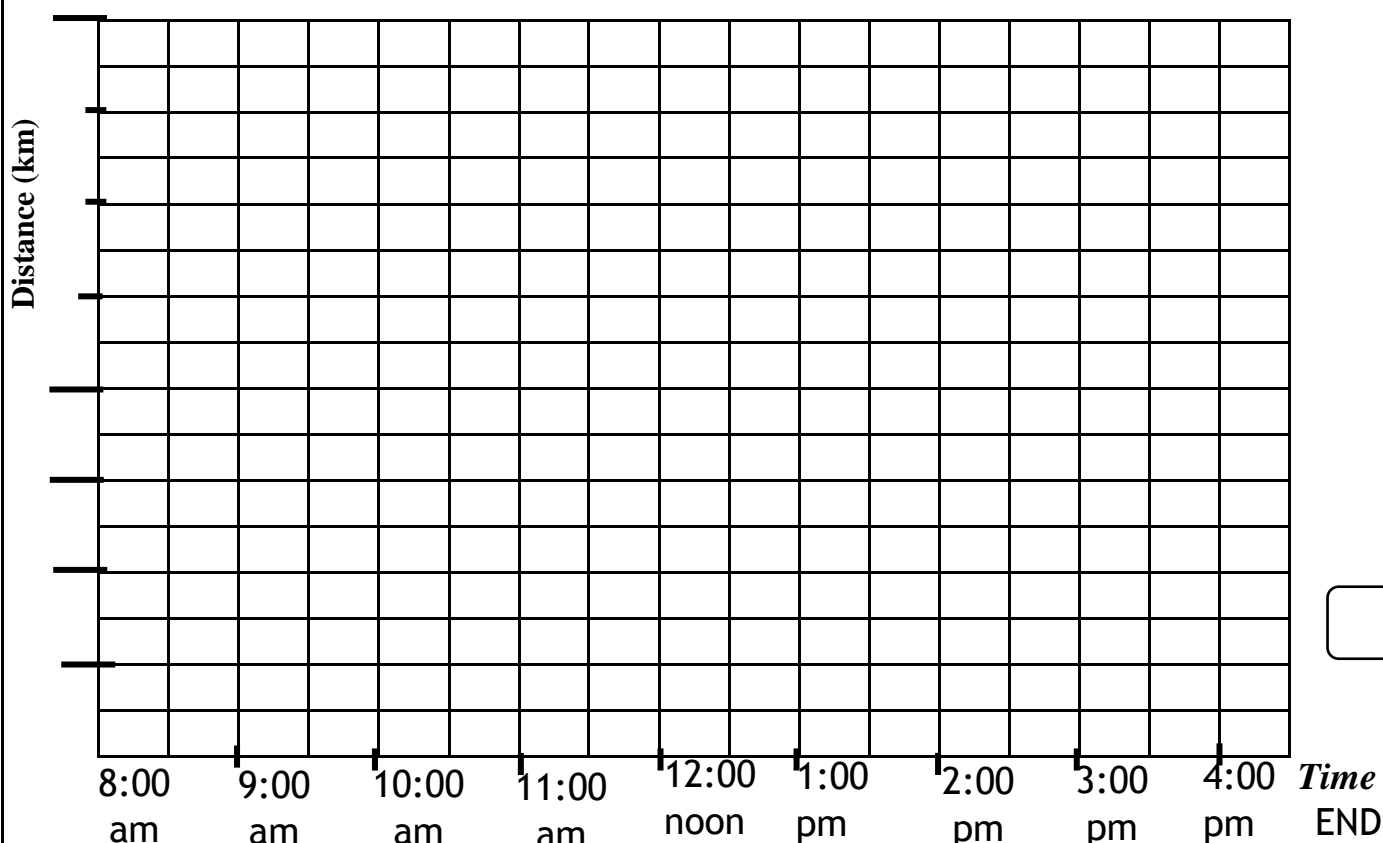
(c)Measure line AT. (01marks)

| 31. | The table below shows the rate at which different currencies were sold and bought at a forex bureau during a certain month. |

Currency	Buying in Ugsh	Selling in Ugsh
1Euro (€)	4000	4020
1 Rwandese franc	4	5
1 US dollar $	3600	3650

(a)How many Euros did Elia get for Ugsh 904500? (2marks)

(b)Mariat came from Rwanda with 219000 Rwandese francs and exchanged them for Us Dollars. How many US dollars did she get from the forex bureau? (3marks)

32. A motorist left town R at 8:00am and drove at 90km/h for an hour to town W. He rested for half an hour at town W. He left town W and drove for an hour at 70km/h to town F. He rested for half an hour at town F. He then left town F and drove back to town R at a steady speed of 40km/h. Draw the motorist's journey on the graph below.

Distance (km)

| 8:00 am | 9:00 am | 10:00 am | 11:00 am | 12:00 noon | 1:00 pm | 2:00 pm | 3:00 pm | 4:00 pm | *Time* END |

10:00
am

10:00
am

@ Arial Educational Consult. Tel. 0756779927, 0775661325, 0704423899, 0752279017   **9 |** P a g e

P . 7   M A T H E M A T I C S   S E T   V   T E R M   3   E X A M I N A T I O N
F O R   A C A D E M I C   E X C E L L E N C E ,   A L W A Y S   U S E   T H E   A R I A L   S C H E M E S   O F   W O R K ,
S I M P L I F I E D   N O T E S ,   H O L I D A Y   P A C K A G E S   A N D   C H A R T S