THE PRIME EXAMINATIONS 2024

P.7 PRE MOCK

MATHEMATICS

Time allowed 2 hours 30 minutes

INDEX NO:

Candidate's Name:..

Candidate's Signature:..

District ID No.:..

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:-

THE PRIME, SCHEMING FRAME WORKS, PUPILS WORKBOOKS, LESSON COURSE BOOKS, HOLIDAY PACKAGES, LEARNING GAMES AND MORE.

Organised by: **PRIME EDUCATIONAL CONSULT** @2024 **Kampala**

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)

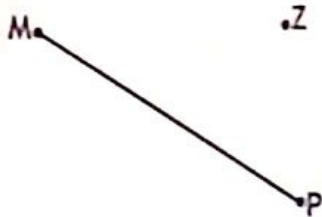**1** Work out: $\frac{4}{9} + \frac{3}{9}$

2 Write 494 in Roman numerals.

3 Work out:
$$\begin{array}{r} 3\ 1\ 2 \\ \times \qquad 5 \\ \hline \end{array}$$

4 Given that:
Set $K \cup L = \{a,b,c,d,e,f,g,h\}$,
$(K \cap L)' = \{a, b, c, d, f, g, h\}$ and
$L - K = \{f, g, h\}$,
List the elements of set K.

5 Find the next number in the sequence.
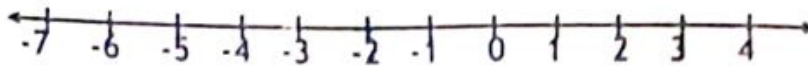5, 9, 15, 23, 32, _____

6 Using a ruler and a pair of compass only, construct a line through point Z parallel to line MP.

M•

•Z

•P

7 Write the number whose standard form is 9.15×10^{-2}.

8 Represent the number operation ⁻4 − ⁻6, on the number line below.

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←——|——|——|——|——|——|——|——|——|——|——|——|——→
   -7  -6  -5  -4  -3  -2  -1   0   1   2   3   4
```

9 Solve: $10 - 2a = 4$

10 A spoon weighs 250g. How many similar spoons can weigh 20kg?

11 If set A= {all counting numbers less than 10}, find the probability of picking a prime number at random.

12 Work out: $\begin{array}{r} 10000_{two} \\ -\ \ 111_{two} \\ \hline \end{array}$

13 A trader sells 40 sweets at sh. 20,000. Find the cost of 15 similar sweets.

14 Round off 24.98 to the nearest whole number.

15 The average age of 4 girls is 12 years. Their total age and that of class teacher is 83 years. Find their class teacher's age.

16 Construct an angle of 150°.

17 Among borrowed sh.600,000 from a bank which offers an interest rate of 4% per month for 6 months. Calculate her simple interest.

18 A cyclist covered a distance of 90km in 1hour and 30 minutes. Find the speed of the cyclist in km/h.

19. Given that a = 3, b= 4, Find the value cf $\sqrt{a^2 + b^2}$.

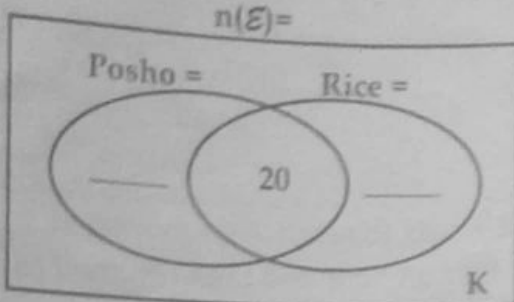**20** The volume of a cylinder whose diameter is 20cm is 9420cm³. Find its height (Take $\pi = 3.14$)

21. In a certain P.7 class, 8K pupils like Posho (P) only, 6K pupils like Rice (R) only, 20 pupils like both Posho and Rice while K pupils like none of the two types of food.

(a) Use the given information to complete the Venn diagram below.

(02 marks)

n(ε)=

Posho =   Rice =

___   20   ___

K

(b) If the number of pupils who like Posho only is 10 more than those who like Rice only, find the value of K. (02 marks)

(c) How many pupils like Rice? (01 mark)

22. Work out: $\dfrac{0.78 - 0.24}{0.14 + 0.04}$ (05 marks)

23. A shopkeeper bought 200 books at sh. 1500 each. He then sold the 160 books at sh. 2000 per book and sold the rest at sh. 1800 per book. Calculate the profit the trader made. (06 marks)

24. A trailor left Busia at 8:40am and took $2\frac{1}{2}$ hours to reach Jinja moving at a speed of 80km/hr. It stayed in Jinja for *half an hour* and then returned to Busia.

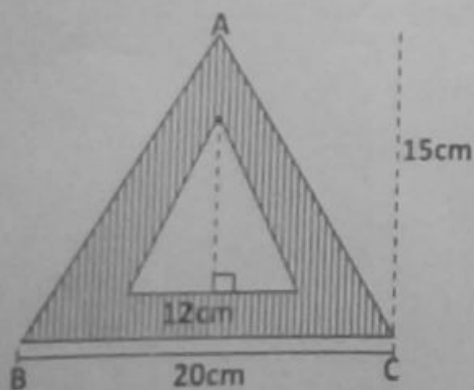(a) Calculate the distance from Busia to Jinja. (02 marks)

(b) At what time did the trailor leave Jinja? (01 mark)

(c) Calculate the trailor's average speed for the whole journey if it reached Busia at 1: 40pm. (03 marks)

25 The average of 4 consecutive odd numbers is 24. Find the numbers if the largest is K. (04 marks)

26 Using a ruler, and a pair of compasses only, construct triangle XYZ in which XY= 6cm, XZ = 5 cm and angle YXZ = 120°.

(a) Measure angle XYZ. (5marks)

27 Study the figure below carefully and use it to answer the questions that follow.

(a) Calculate the area of triangle ABC. (02 marks)

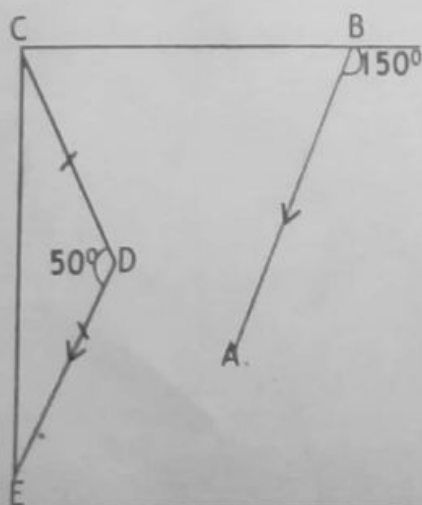(b) If the area of the shaded part is 108cm², find the height of the unshaded triangle. (03 marks)

28 (a) Solve: $(8m - 4) - (3m + 2) = 14$ (02 marks)

(b) Simplify: $9b + 5k + 3b - 2k$ (02 marks)

29 **Study** the figure below and use it to answer the questions that follow.

Find the size of angle
(a) DEC   (02 marks)

(b) BCD   (02 marks)

30 | The table below shows marks scored by pupils in a science test. Study it carefully and use it to answer the questions that follow.

Marks	55	60	70	80	90
No. of pupils	4	5	6	2	3.

(a) How many pupils did the test?   (02 marks)

(b) Find the mean mark.   (03 marks)

31 | A parent shared some money to three his children Anita, Joseph and Joy as follows. Anitah got 30% of the money, Joseph got 50% of the money and the rest was given to Joy.
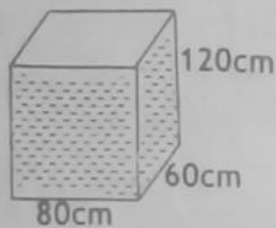
(a) What percentage was given to Joy?   (02 marks)

(b) If Joseph got sh 6000 more than Joy, find the total amount of money the parent shared. **(02 marks)**

(c) How much did Anitah get? **(01 mark)**

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32 The tank shown below is full of water.

120cm
60cm
80cm

(a) How much water is in the tank in litres? **(02 marks)**

(b) If a tap which powers **12 litres of water** per minute is connected to the tank, how long does it take to empty the tank? **(02 marks)**

(c) How much water will remain in the tank after half an hour? **(02 marks)**