# KAMPALA MANDELA EXAMINATIONS
## P.7 PRE-MOCK SET III TERM II ASSESSMENT 2023

## MATHEMATICS

Time allowed: 2 hours 30 minutes

INDEX NO: ☐☐☐☐☐☐☐☐☐

Name _____

School: _____

Stream: _____

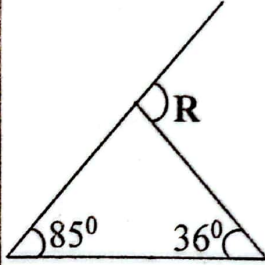**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO**

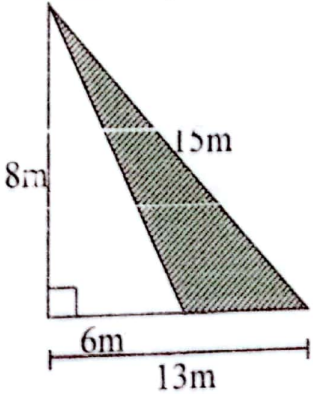**READ THE FOLLOWING INSTRUCTIONS CAREFULLY.**

1. The paper is made up of two Sections A and B.

2. Section A has **20** questions (40marks).

3. Section B has **12** questions (60marks).

4. **Answer ALL questions.** All answers to both Sections A and B must written in the space provided.

5. All answers must be written in **BLUE** or **BLACK** ball pen or ink.

6. Only diagrams and graph work must be drawn in pencil.

7. Unnecessary crossing will lead to loss of marks.

8. Poor handwriting, which cannot be easily read, may lead to loss of marks.

| FOR EXAMINER'S USE ONLY | | |
|---|---|---|
| Qn No. | MARKS | SIGN |
| 1-5 | | |
| 6-10 | | |
| 11-15 | | |
| 16-20 | | |
| 21-25 | | |
| 26-30 | | |
| 31-32 | | |
| TOTAL | | |

## SECTION A (40marks)
### Attempt all questions in this section
### Questions 1 to 20 carry two marks each

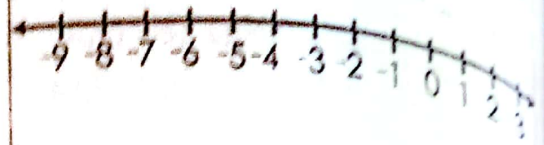| | | | |
|---|---|---|---|
| 1. | Multiply: 26 by 4. | 5. | Simplify $\dfrac{14}{17} \div \dfrac{7}{34}$ |
| 2. | Given set $P = \{2, 3, 5, 7, 11\}$, find $n(P)$ | 6. | Find the size of angle **R**. |
| 3. | Write CDLIX in words. | 7. | A mathematics lesson started at 9:15a.m and ended at 10:10a.m. How long did it last? |
| 4. | Edina sold a pair of trousers at sh. 51500 making a profit of sh. 3300. What was the cost price of the pair of trousers? | 8. | Find the number whose scientific notation is $7.3 \times 10^{-3}$ |

Question 6 figure: triangle with angles $85^0$ and $36^0$ at the base, and angle **R** at the top.

**9.** The average age of two pupils is 13 years. When another pupil joins them, their average age becomes 15 years. Find the age of the third pupil.

**12.** Simplify: $\frac{1}{3} \div \frac{2}{5}$

**10.** Express 10m/s to km/hr.

**13.** Increase sh. 18000 by $12\frac{1}{2}\%$

**11.** In the figure below, find the area of the shaded part.

8m
15m
6m
13m

**14.** Using a pair of compasses, ruler and pencil only, construct an angle of $150^0$ in the space below.

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15. Represent $243_{five}$ on the abacus below.

Hundreds  Tens  Ones
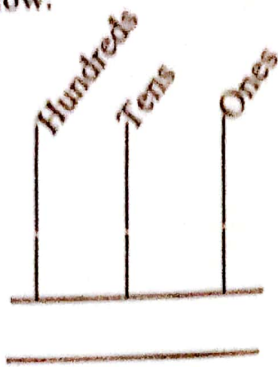
18. Using a number line below work out $3 \times -4$.

-9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3

16. Okirya deposited sh. 240000 in a bank which offers 4% interest rate per year for a period of 9 months. Find his simple interest.

19. A box contains 6 red balls, 4 blue balls and 7 black balls. What is the probability of picking a red ball from the box?

17. A garden can be dug by 3 boys in 20 days. How many boys working at the same rate can dig the same garden in 12 days?

20. Find the perimeter of the semi-circle below.

14cm
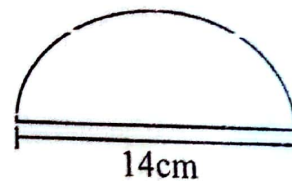
21. Namubiru went shopping with sh. 60000 and bought the items below.

2 tins of blue band sh. 2800 each.

$2\frac{1}{4}$ kg of beef at sh. 13000 per kg.

1kg of sugar at sh. 2400 per $\frac{1}{2}$kg

48 mangoes at sh. 800 for a heap of every 6 mangoes.

(a)  Find her total amount.

(b)  If she was given discount of 10%, how much money did she pay?

(01mark)

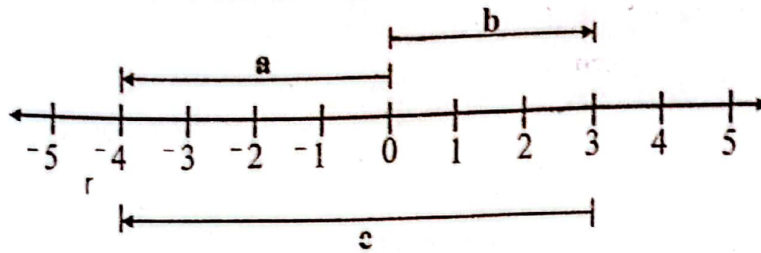22. (a) Work out:  $\dfrac{0.6 \times 28.8}{1.2 \times 0.04}$  (03marks)

(02marks)

(b) Simplify: $3\frac{2}{5}$ of $1\frac{1}{2} \div 3\frac{1}{2}$

23. By selling a shirt at sh. 64000, Eunice made a loss of 20%. At what price would she have sold the shirt in order to make a profit of 10%? (04marks)

24. Use the number line below to answer the questions that follow.



(I) Find integers.

a = _____ b = _____ c = _____ (03marks)

(II) Write down the mathematical statement shown on the number line above. (02 marks)

25. The table below shows additions in base five. (05marks)

| + | 2 | 3 | 4 |
|---|---|---|---|
| 2 | 4 | ___ | ___ |
| 3 | ___ | ___ | ___ |

26. The average of four consecutive odd numbers is sixteen.
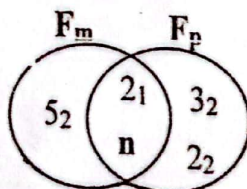    (a) Find the numbers. (04marks)

    (b) What is their range? (01mark)

27. Given that the greatest common factor of M and P is 6 on the Venn diagram below, use it to answer the questions that follow.
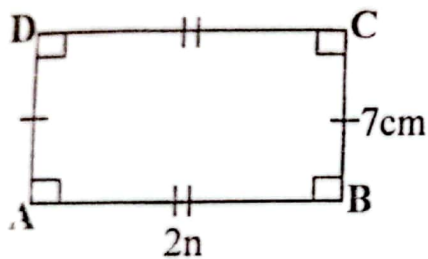
(a) Find the value of n. (02marks)

(b)  Find the value of **m**.                                    **(02marks)**

(c)  Work out the lowest common multiple (LCM) of **m** and **p**.   **(02marks)**

28.  The perimeter of the plane figure below is 46cm.



(a)  Find the value of n.     **(02marks)**

(b) Calculate the area of the rectangle **ABCD**.          **(03marks)**

29.  A car moved at a speed of 60km/hr for 3 hours from Luwero to Kampala. It returned to Luwero through the same route at a speed of 90km/hr.

(a)  Find the distance covered for the whole journey.          **(02marks)**

(b)  Calculate the mean speed for the entire journey.          **(03marks)**

30. In a class, there are 20% more girls than boys. If there are 30 boys.
Find the number of girls. **(04marks)**

31. Eric and Noah shared certain amount of money in the ratio 2:3. Eric gave $\frac{1}{5}$ of his share to Daniel and Noah gave $\frac{3}{10}$ of his share to Daniel. If they both gave sh. 260000.

    (a) How much money did they share altogether? **(03marks)**

    (b) How much money did each of them remain with? **(02marks)**

32. A plot of land is used as follows;
    20 hectares for growing maize
    30 hectares for growing Rice
    50 hectares for growing millet.
    Represent the above information on an accurate circle graph.
    (Use a radius of 3.5cm) **(05marks)**