KAMPALA CITY EXAMINATIONS BOARD

QUALITY CHECK THREE

2025

MATHEMATICS

Time Allowed: 2 hours 30minutes

Random No.						Personal No.		

Candidates' name: .....

Candidates' 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 **16 printed pages**.
3. Answer **all** the questions. All the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** the 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 Examination room.
6. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
7. Do not fill anything in the table indicated: **"FOR EXAMINERS' USE ONLY"** and in the boxes inside the question paper.

Official line: **CEO** 0785119093 @ city exams

FOR EXAMINERS' USE ONLY		
QN NO.	**MARKS**	**EXR'S NO.**
1-5		
6-10		
11-15		
31-15		
16-20		
21-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

SECTION A:40MARKS

*Answer **all** questions in this section*

*Questions **1** to **20** carry **two** marks each*

1. Workout:

$$\begin{array}{r} 1 \\ \times\ 1 \\ \hline \\ \hline \end{array}$$

2. Solve for m: $3(m - 1) - 2(m - 2) = 7$.

3. Write $(4x10^{3}) + (3x10^{2}) + (4x10^{-1} + (3x10^{-2})$ in a short form.

4. Aloro was born in 35**BC** and died in 50**AD**. How old was he when he died?

Turn Over

5. A quarter minute lesson ended at noon. At what time did it start?

6. Three boys Peter, Paul, and Paula shared 50 sweets. Paul got 15 sweets, Paula got 20 sweets and the rest were given to Peter. Express Peter's share in tally marks.

7. Write the place value of 2 in 210_{three}.

8. Find the circumference of a circle whose radius is 7cm.

Turn Over

9. Workout $2x2^2$ …… (finite7) using a dial method.

10. Using a ruler, a pencil and a protractor only, construct an angle of 135° in the space provided below.

11. Workout: (0.3 x 31) + (0.3 x 19).

Turn Over

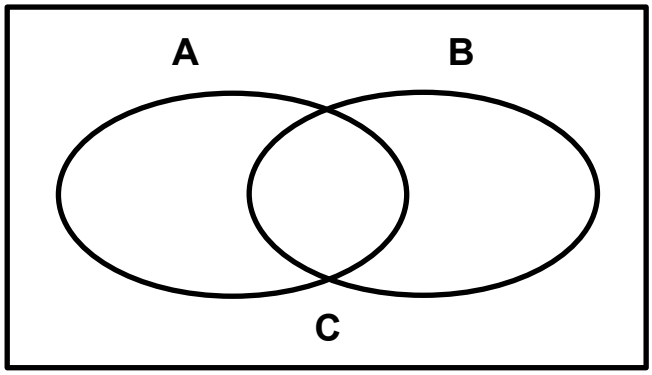
12. In a class, 40% of the pupils are boys and the rest are girls. If there are 36 girls in the class, find the total number of pupils in the class.

13. A motorist travels 1.5km in 1 hour and 30 minutes. Express the speed of the motorist in kilometers per hour.

14. The mean of $2(2a + a)$, 0, $3(a - 1)$, 6 and 4 is 14. Find the value of a.

Turn Over

15. In the venn diagram below, shade **C**'.

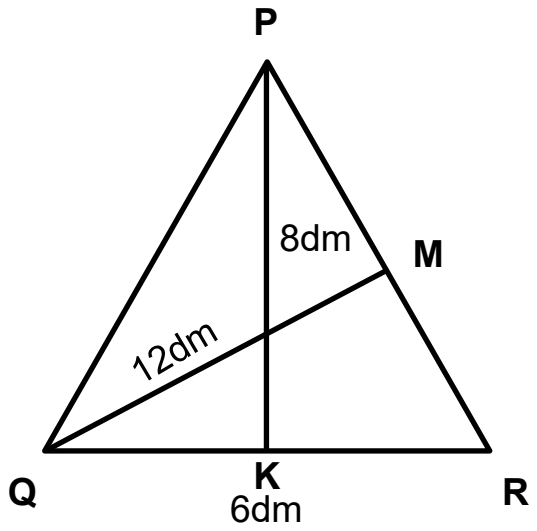


16. How many 500 shilling coins are equivalent to twenty thousand shilling notes?

17. Workout: $4^2+3^0+2^3+5^1$

Turn Over

18. In the figure below, **PQR** is a triangle. **MQ** and **KP** are heights of the same triangle. Study it carefully and find the length **PR**.



19. Write the number whose scientific notation is 8.36×10^3.

20. In a farm of cows and chicken, there are 35 animal heads and 110 animal legs. How many cows and chicken are in the farm?

Turn Over

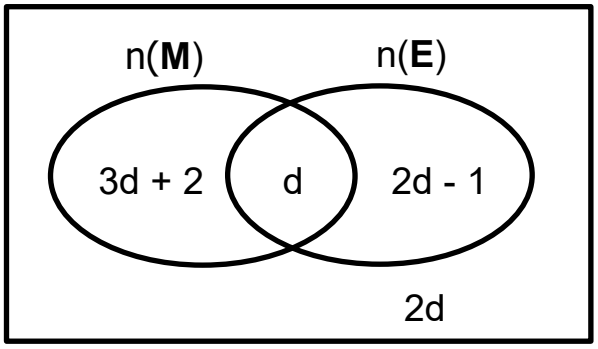
SECTION B: 60 MARKS

*Answer **all** questions in this section*

Marks for each question are indicated in the brackets

21. In a class of 33 pupils, (3d + 2) pupils like Mathematics (**M**) but not English, (2d - 1) Pupils like English (**E**) only, some pupils like both Mathematics and science while 2d pupils like neither mathematics nor English.

n(ε) = 33



(a) Find the value of **d**. (*02 Marks*)

(b) How many pupils like only one subject? (*02 Marks*)

(c) Find the probability of picking pupils who like neither of the two subjects (*01 Mark*)

Turn Over

22. (a) Simplify: $1\frac{1}{2}$ of $2\frac{1}{2} \div 5 - \frac{1}{4} + \frac{1}{3}$. (*03 Marks*)

(b) If the sum of **X** and $3\frac{1}{5}$ is $3\frac{4}{2}$, Find the value of **X**. (*03 Marks*)

23. (a) Workout: (*02 Marks*)

$$\begin{array}{r} 3\ 1\ 2_{four} \\ -\ 1\ 1\ 3_{four} \\ \hline \\ \hline \end{array}$$

(b) Group 23_{ten} in base five. (*02 Marks*)

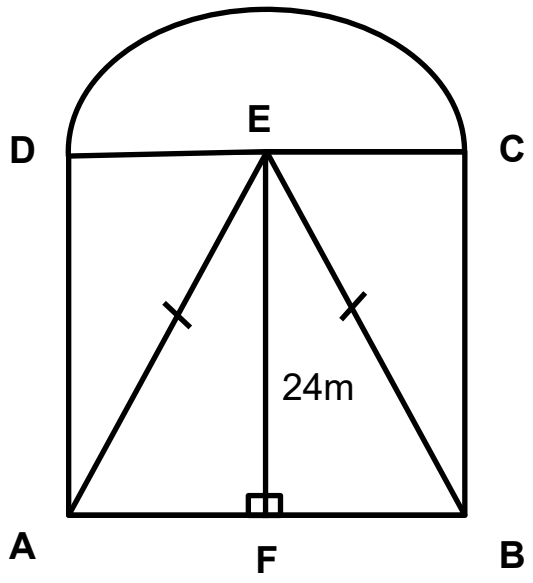
Turn Over

24. (a) Using a ruler, a pencil and a pair of compasses only, construct a triangle **XYZ** where **XY** = 6.7cm, angle **ZXY** = 75° and angle **ZYX** = 45° and drop perpendicular from **Z** to meet line **XY** at **M**. (*04 Marks*)

(b) Measure the height of the triangle **XYZ**. (*01 Mark*)

Turn Over

25. In the figure below, length **EF** is 24m, **ABE** is an isosceles triangle and **ABCD** is a rectangle. The two figures are attached to semi-circle as shown below. Study it carefully and answer the questions that follow.

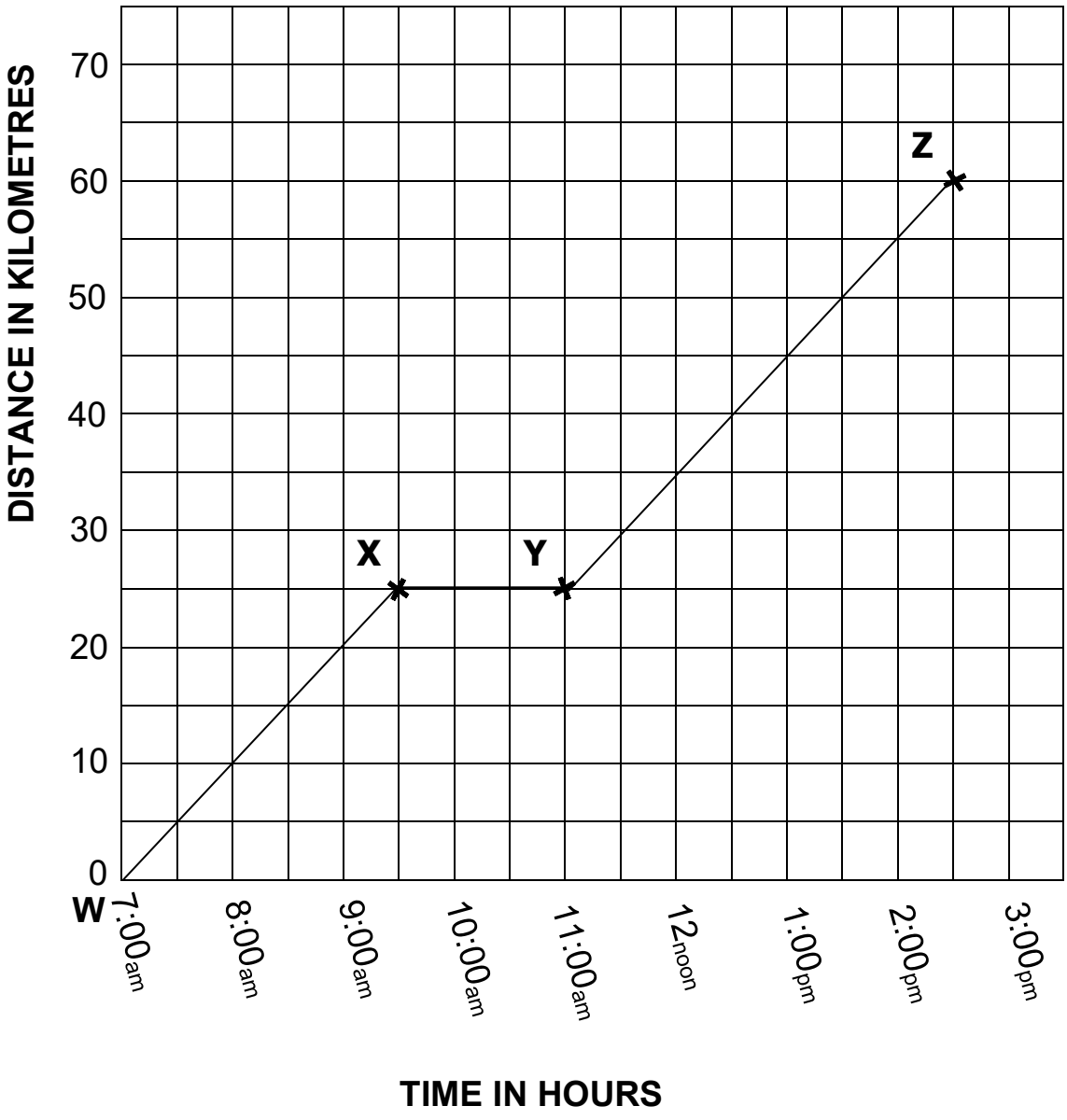


(a) If the area of the semi circle is $77m^2$, Calculate the perimeter of the rectangle. (Use $\pi = \frac{22}{7}$) (*03 Marks*)

(b) Find the length **EB**. (*03 Marks*)

Turn Over

26. The graph below represents Mr. Okidis' journey from town **W** to **Z** via town **X** and **Y.** Study it carefully and answer the questions that follow.

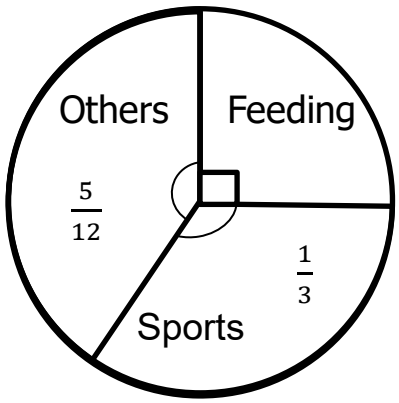


(a) At what time did he reach town **Z**? (*01 Marks*)

(b) Calculate Mr.Okidis' average speed for the whole journey. (*03 Marks*)

Turn Over

27. The pie-chart below represents how Kakembo spends his monthly salary. Study it carefully and answer the questions that follow.

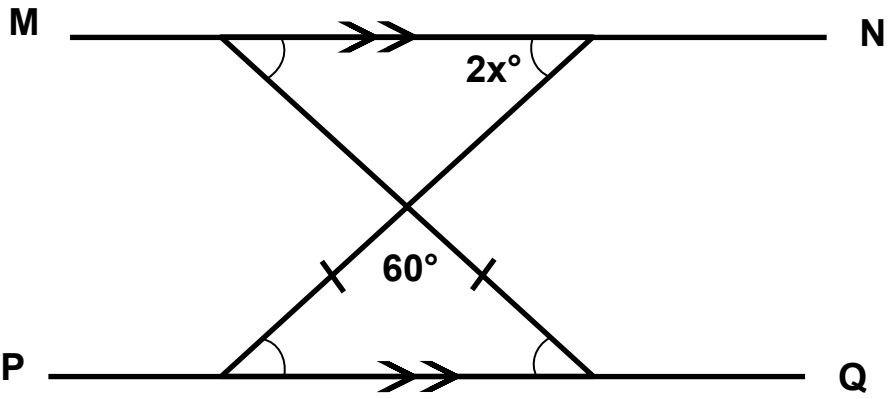


(a) If he spends sh.120,000 on feeding, find his monthly salary. (*03 Marks*)

(c) How much more does she spend on Others than sports? (*03 Marks*)

Turn Over

28. In the figure below, **MN** is a parallel line to **PQ**. Study it carefully and answer the questions that follow.



(a) Find the value of **X**. (*02 Marks*)

(b) Find the number of sides of a polygon whose interior angle sum is 540. (*03 Marks*)

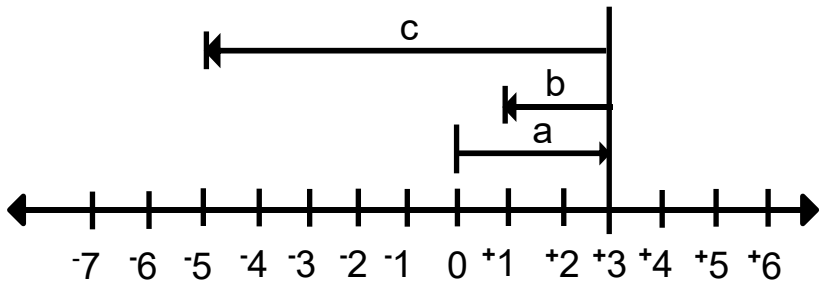
29. The exchange rate for British Pound sterling (£) and Kenya shilling (k.sh) to Uganda shilling (Ug.sh) are shown below.

1 British Pound sterling (£) = Ug.sh 4,500.
1 Kenya shilling (K.sh) = Ug.sh 45.

(a) How many British Pound sterling (£) will one get from 2700 Kenya shilling? (*03 Marks*)

(b) If a tyre cost 65 British Pounds, how much would this be in Uganda shilling? (*02 Marks*)

30. Study the number line below and use it answer the questions that follow.



(a) Write the integers represented by;

(i) a

(ii) b

(iii) c

Turn Over

(b) Write the mathematical statement shown above. (*02 Marks*)

31. (a) Ben, Bernard and Bena share some money in the ratio of 2 : 3 : 4 respectively. If Ben got sh.24,000 less than Bena, how much money did they share altogether? (*03 Marks*)

(b) How much more did Bernard get than Ben? (*02 Marks*)

32. Given that $m = \frac{1}{2}(a + 10)$ and $a = {}^{-}4$.

(a) Evaluate: $m - a$. (*03 Marks*)

(b) Solve and find the solution set for the inequality $2x + 7 \leq 5x - 14$. (*03 Marks*)

THE END