# KAMPALA CAPITAL CITY AUTHORITY

## DIRECTORATE OF EDUCATION AND SOCIAL SERVICES

## PRIMARY SEVEN MOCK EXAMINATIONS 2023

## MATHEMATICS

***TIME ALLOWED: 2 HOURS 30 MINUTES***

| ***INDEX NO:*** | ***EMIS No.*** | | | | | | ***Personal No.*** | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

***CANDIDATE'S NAME:*** .....

***CANDIDATE'S SIGNATURE:*** .....

***EMIS No:*** .....

***DIVISION NAME:*** .....

***Read the following instructions carefully.***

1. This paper is made up of two sections: **A** and **B**
2. Section **A** has **20** questions (**40** marks)
3. Section **B** has **12** questions (**60** marks)
4. Answer ALL questions in both sections **A** and **B**
5. ALL answers **MUST** be written in Blue or Black Ball - point pen or ink
6. Un-necessary changes in your work may lead to loss of marks.
7. All diagrams **MUST** be drawn in pencils.
8. Any handwriting that cannot be easily read may lead to loss of marks.
9. Do **not** fill any thing in the boxes shown ***"For Examiner's use only".***

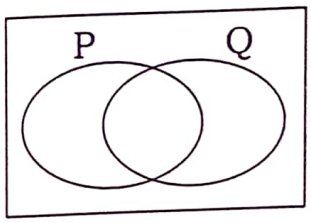
**FOR EXAMINERS' USE ONLY**

| *QN. NO.* | *MARKS* | *SIGN* |
|---|---|---|
| 1 - 10 | | |
| 11 - 20 | | |
| 21 – 25 | | |
| 26 - 30 | | |
| 31 - 32 | | |
| ***TOTAL*** | | |



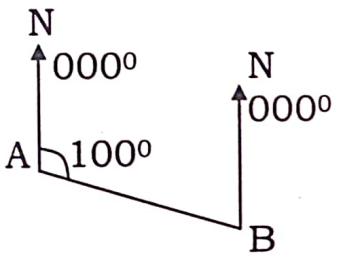
***TURN OVER***

## SECTION A

| | | | |
|---|---|---|---|
| 1. | **Workout:** 6 ÷ 3 | 2. | Shade the region representing **$(PnQ)^{I}$**, in the Venn diagram below.<br>  |
| 3. | Using distributive property to workout: **(81 ÷ 7) – (11 ÷ 7)** | 4. | Write the number **2023** in words. |
| 5. | Find the next number in the sequence given below.<br>2, 4, 7, 12, 19, _____ | 6. | Solve the inequality: **3 – 2m < 7** |
| 7. | Express $\frac{13}{20}$ as a decimal fraction. | 8. | The temperature on the top of the mountain was **$5^0$** celcius, at 11:00am. By 2:00pm, the temperature rose to **$8^0$** celcius. Find the new temperature on the top of the mountain. |

| | | | |
|---|---|---|---|
| 9. | Mariam scored the following marks her daily mental work exercise for for a week ***7, 6, 6, 7, 2, 6, 8***. What was her modal score? | 10. | A cyclist rode at a steady speed of **54** kilometer per hour. What was his speed in metres per second? |

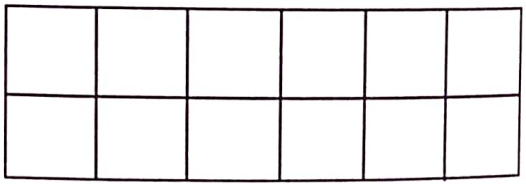
11. In the diagram below, find the bearing of **A** from **B**.




12. The cost of sending official announcement on a community radio is as follow.

*Ug. Sh. 20,000 for the first 30 words*
*Ug. Sh 1,000 for each extra word*

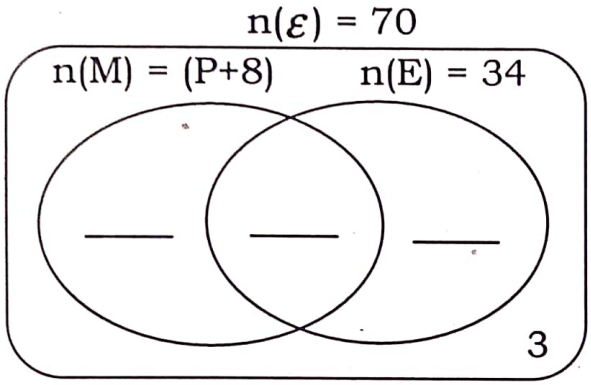
Find the cost of sending an announcement of 45 words through the the community radio.

| | | | |
|---|---|---|---|
| 13. | Convert $\mathbf{0.04m^2}$ to $cm^2$ | 14. | Simplify: $\mathbf{K^2 - 3K + 2K^2 + 3K}$ |
| 15. | If Set **A = {c, o, w}**, find the number of subsets in set **A**. | 16. | Write **CIV** in Hindu Arabic numerals. |
| 17. | Given that prime factors of $\mathbf{Y = 2^2 \times 3}$ and prime factors of $\mathbf{X = 2^1 \times 3^2 \times 5^1}$. Use the given prime factors above to find the LCM of **X** and **Y**. | 18. | In the diagram below shade **25%** of the total number of squares.  |
| 19. | Using a ruler, a pencil and a pair of compasses only, construct an angle of $\mathbf{105^0}$ in the space provided below. | 20. | A pen costs **sh. (2,000 + k)** if it costs twice as much as a book write an expression for the cost of a book. |

## SECTION B

21. In a class of **70** pupils, **34** like English (E), **(P+8)** like Mathematics (M), **8** like both subjects and **3** like neither of the two subjects.

a. Using the information above complete the Venn diagram below.




*(3marks)*

b. How many pupils like Mathematics?

*(2marks)*

22. Express **24.009** in standard form.

*(2marks)*

b. **Workout:** $11_{two} \times 11_{two}$

*(2marks)*

c. Find the value of **2** in the number $\mathbf{1201_{five.}}$ *(1mark)*

23. a. In a market of **800** people $\frac{1}{4}$ are children and the rest are adults. $\frac{2}{3}$ of the adults are women and the rest are men.
If $\frac{3}{5}$ of the children are boys, how many boys are in the market?

*(2marks)*

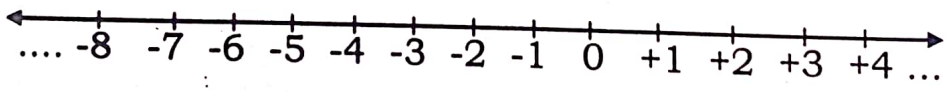
b. Express the number of girls in the market as a percentage of women in the market.

*(3marks)*

24. Workout: $^{-}4 - {}^{-}7$ using the number line below.

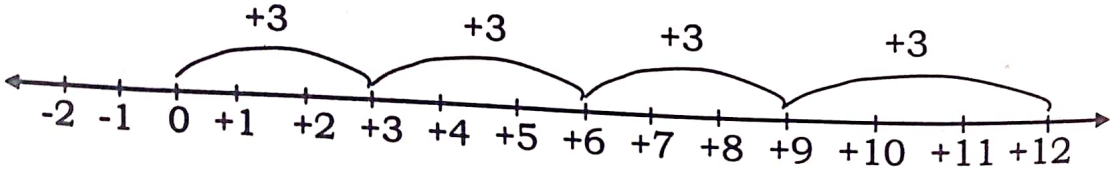
*(3marks)*

a.




b. Write a mathematical statement from the number line below.

*(2marks)*



| | |
|---|---|
| 25. | A boy spent **sh. 4,500** of his pocket money on breakfast, **sh. 7,500** on lunch and **sh. 6,000** on super. Using a radius of **3.5cm**, construct an accurate pie-chart to show the above information.<br><br>*(5marks)* |
| 26. a. | Two trains, arrive at the station at an interval of **1½** hours one after the other. A man arrived at the station, **55** minutes after the first train had arrived. For how long will the man wait for the second train to arrive?<br><br>*(2marks)* |
| b. | A motorist travelled **80km** in **40minutes**. Calculate the speed of the motorist in kilometers per hour.<br><br>*(3marks)* |

27. a. Given that the present exchange rate is US $ **1** to Ug. **Sh. 3,600**. If a watch costs Ug. **Sh. 72,000**, how much does one pay in US. dollars for a watch?

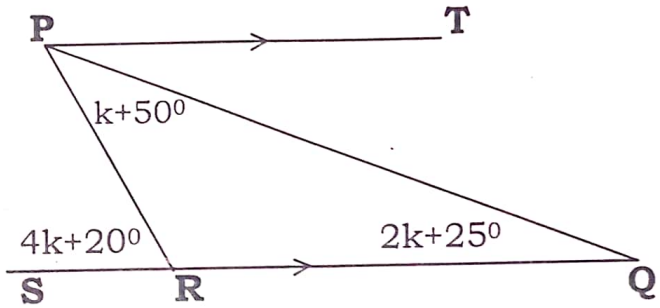
*(2marks)*

b. The cost of **0.25kg** of sugar is **sh. 1,250.** A teacher bought **2½kg** of sugar, how much money did the teacher pay for the sugar?

*(3marks)*

28. In the figure below line **PT** is parallel to line **SQ**. Study the diagram below and use it to answer the questions that follow.

a. Find the value of **K**. *(3marks)*

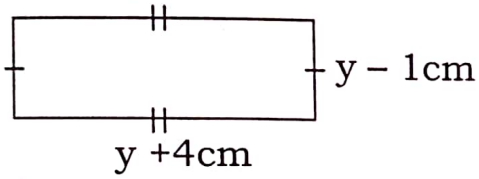



b. Find the size of angle **RPT**. *(2marks)*

29. a. Find the number of revolutions a wheel of diameter **70cm** can make to cover a distance of **4.4km**?

*(3marks)*

b. The perimeter of the rectangular floor of a room shown below is **34cm**. Find the value of **y** given that the length is **y + 4cm** and width **y – 1cm** respectively.




30. a. **Simplify:** $\frac{1}{2} \div \frac{2}{3} - \frac{3}{8}$

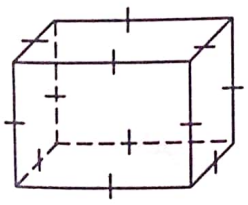
*(2marks)*

b. **Workout:** $\frac{0.45 + 0.55}{0.8 - 0.3}$

*(3marks)*

31. The figure below shows a cubical box of volume **1 litre**.

a. Find the length of its side in centimeters.
(1litre = $1000cm^3$)



*(3marks)*

| | |
|---|---|
| b. | Workout its total surface area. *(2marks)* |
| 32. a. | A head teacher's office is **24metres** East of the main hall and a P.7 block is **32metres** North of the head teacher's office. Draw a sketch diagram to show the position of the **3** places (indicate the northern direction) *(1mark)* |
| b. | Using a scale of **1cm** to represent **4metres**, draw an accurate diagram and measure the shortest distance between the P.7 block and the main hall. *(4marks)* |

***END***