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.

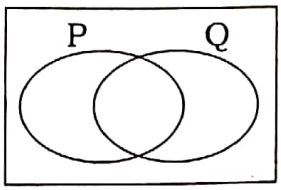
1. This paper is made up of two sections: **A** and **B**
2. Section **A** has **20** questions (**40** marks)
3. Section **B** has **12** questions (**60** marks)
4. Answer ALL questions in both sections **A** and **B**
5. ALL answers **MUST** be written in Blue or Black Ball - point pen or ink
6. Un-necessary 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		

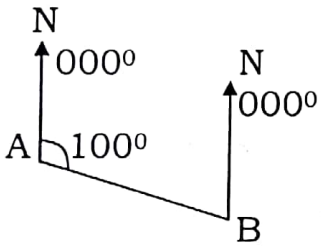
TURN OVER

SECTION A

1.	**Workout:** 6 ÷ 3	2.	Shade the region representing **$(PnQ)^{I}$**, in the Venn diagram below. 
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. 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~~ Rise in 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?

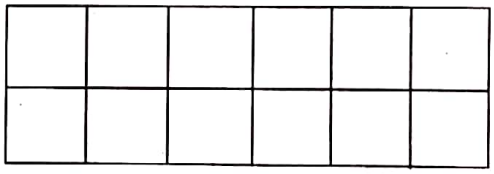
11. In the diagram below, find the bearing of **A** from **B**.



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

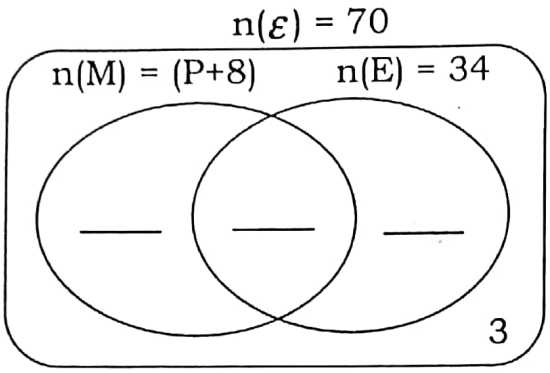
Find the cost of sending an announcement of 45 words through the the community radio.

13.	Convert **$0.04m^2$** to cm^2	14.	Simplify: **$K^2 - 3K + 2K^2 + 3K$**
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 **$Y = 2^2 \times 3$** and prime factors of **$X = 2^1 \times 3^2 \times 5^1$**. 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 **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)

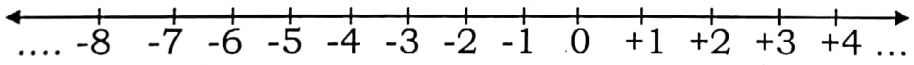
c. Find the value of **2** in the number $\mathbf{1201}_{\mathbf{five.}}$ *(1mark)*

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)

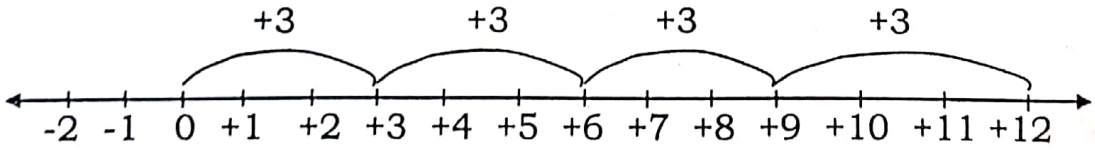
b. Express the number of girls in the market as a percentage of women in the market.
(3marks)

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. *(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? *(2marks)*
b.	A motorist travelled **80km** in **40minutes**. Calculate the speed of the motorist in kilometers per hour. *(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?

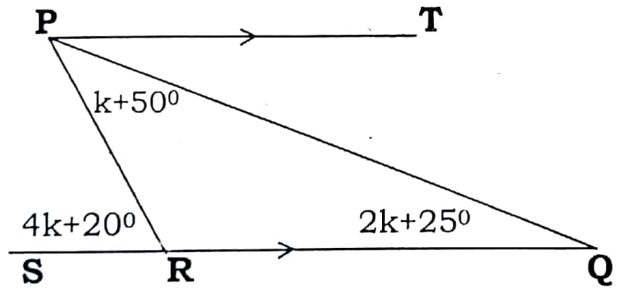
(2marks)

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.

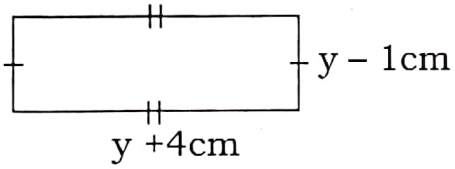
a. Find the value of **K**. *(3marks)*



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.

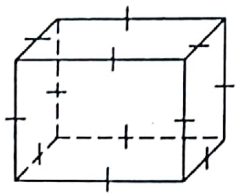


30. a. **Simplify**: $\frac{1}{2} \div \frac{2}{3} - \frac{3}{8}$ *(2marks)*

b. **Workout:** $\frac{0.45 + 0.55}{0.8 - 0.3}$ *(3marks)*

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

a. Find the length of its side in centimeters.
(1litre = 1000cm³)



(3marks)

b.	Workout its total surface area. *(2marks)*
32.	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.
a.	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