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MATHEMATICS

Paper 1

2024

$2\frac{1}{4}$  hours

**CLEVERLAND HIGH SCHOOL-MAYA**  
**END OF TERM II ASSESSMENT EXAMS**  
**Uganda Certificate of Education**  
**SENIOR ONE**  
**MATHEMATICS**  
**Paper 1**  
2 hours 15 minutes

**INSTRUCTIONS TO CANDIDATES:**

*This paper consists of **two** sections; **A** and **B**. It has **six** examination items.*

*Section **A** has **two** compulsory items.*

*Section **B** has **two** parts; **I** and **II**. Answer **one** item from each part.*

*Answer **four** examination items in all.*

*Any additional item(s) answered will **not** be scored.*

*All answers **must** be written in the Answer booklet(s) provided.*

*Graph Paper is provided.*

*Silent, non-programmable scientific calculators and mathematical tables with a list of formulae may be used.*

**TURN OVER**

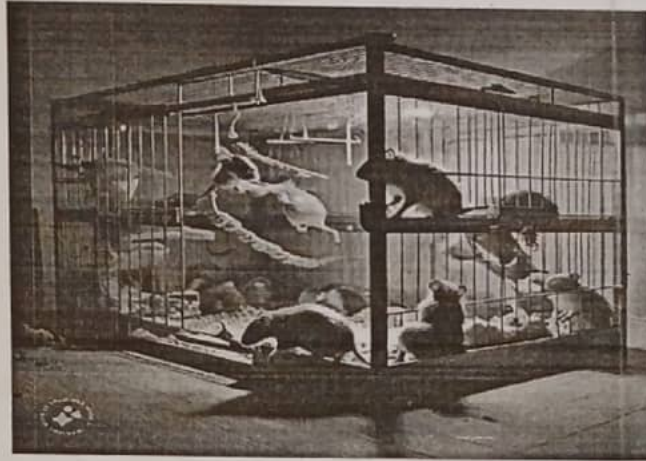
## SECTION A

Answer all items in this section.

### Item 1.

Mr. Enock a biology teacher at St. Cleverland high school organized a biology practical on dissection of rats. He found it very expensive to buy rats. He decided to construct a rectangular cage of length 8cm and width 5cm so as to rear the rats for practicals in biology and reduce the cost incurred by the school administration.

Support material.



### Task.

As a senior one student with knowledge about geometry and construction help Mr. Enock to construct an accurate cage where he will keep the rats for practicals in biology and also find the area and the perimeter of the cage. ( using a scale  $1\text{m}=1\text{cm}$ ). (25scores)

### Item 2.

At St. Joseph of Nazareth Kavule Katende there are two bells for O level and A level which ring at intervals of 30 minutes and 40 minutes respectively. The bells first rang together at 10:30am for the break first.

### Task

As a senior one student and a time keeper of that school help other members whom you found in argument to know the time when the bells will ring together at the same time. (25 scores)

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## SECTION B

*This Section has two Parts; I and II*

### Part I

*Answer one item from this part*

#### Item 3.

In Bukaaru village, Mr. Kyagulanyi had six children: Kintu, Mpindi, James, Talemwa, Mohammed and Nakayi. He made his will and kept it with a friend. After his death, children were fighting for the property as the elder son wanted to claim 50% as the heir. The lawyer saved the situation by reading the will. Nakayi was given 10% of the property. The remaining property was shared among the boys and the wife. Kintu was given  $\frac{1}{5}$ , Mpindi was given 15%, James was given 20%, Talemwa was given 5% and Mohammed was given 20%. The remainder was given to the wife.

#### Task

- Help the family administration to know how much property will each take given that Kyagulanyi had property worthy ugx.6,000,000.
- What percentage of Mr. kyagulanyi's property was allocated to his wife? (25 score)

#### Item 4

- A school has organized a sports tournament amongst the 4 teams of the school. Nile, Kafu, Kagera and Ssezibwa. The game master has been provided with ugx.2,000,000 to be shared amongst the four houses as follows.

House	Points			
	Football	Netball	Athletics	Debate
Nile	6	5	23	5
Kagera	5	6	18	4
Ssezibwa	7	7	13	7
Kafu	3	7	32	3



Conditions for award:

Position	Percentage share
1	50%
2	30%
3	15%
4	Remainder

**Task**

- d) Help the game master share the money amongst the participating house.

### **Part II**

*Answer one item from this part.*

#### **Item 5.**

The house of prayer ministries international for long time has been soliciting money to construct a pentagon church which can congregate all the church members. The senior pastor, Pastor Aloysius Bujingo has a vision of a pentagon church which can fit exactly in the plot of land available. He also has to buy a sinotruk to transport all the building materials and requirements. The contractor informed him ugx.400, 000,000. He then proceeded to Nina motors to buy a sinotruk. A brand new sinotruk costs four hundred eighty millions on cash. It can also be bought by paying a deposit of a quarter of the cash value and either pay ugx.7.5 millions weekly for 50 weeks or pay ugx.24.5 millions monthly for 15 months. The pastor does not have the required money to obtain the sinotruk on each.

**Task.**

- Help the pastor determine the cost of the church.
- How much extra will he pay for the sinotruk and explain why? (25 scores)

#### **Item 6.**

Mr.Kasozi a farmer in Busembe village in preparing to construct a poultry house in form of a polygon whose exterior angle is  $120^0$  more that exterior angle. He is preparing to divide his poultry house into a triangular portion in which he will put the layers, broilers, cloilors and other types of poultry.

**Task.**

- Help Mr. Kasozi to know the number of triangular houses he made in the poultry house to fit his plan.
- Calculate the interior angle sum of Mr. Kasozi poultry house.

**END**