

NAME: ..... STREAM.....

**END OF TERM II EXAMINATIONS**  
**S.2 MATHEMATICS**  
**1 Hour 30 Minutes**

**INSTRUCTIONS:**

- Attempt all questions in this paper.
- Use only the spaces provided to answer the questions.

1. The bearing of Kamuwunga from Lutengo is  $087^0$ . What is the bearing of Lutengo from Kamuwunga?

**(04 marks)**

2. When designing a cam for a pump, the expression  $\pi \left(\frac{r}{2}\right) \left(\frac{4}{3\pi r^2}\right)$  is used. Simplify the expression.

**(03 marks)**

3. In the figure below, drop a perpendicular from  $P$  onto the line segment  $AB$ .

$\cdot P$

$A \longleftrightarrow B$

**(03 marks)**

3. Simplify  $\frac{4x^3y-3x^3y+2x^2y}{2x^2y}$ .

(02 mark)

4. Convert  $122_{\text{three}}$  to decimal base.

(03 marks)

5. Mukasa has  $1\frac{1}{2}$  of  $\frac{1}{3}$  an acre of land at Kakiri. He divides the land into plots each measuring  $\frac{1}{8}$  an acre. If he sells each plot at Shs.4 500 000, how much money does he receive from the sale of his land?

(04 marks)

6. After COVID, a man's salary decreased from Shs.750 000 to Shs.600 000. Calculate the percentage decrease in the man's salary.

(02 marks)

7. (a) Given that  $D = \{-3, -2, -1, 0, 1, 2, 3\}$  and  $E = \{1, 4, 9\}$ , draw a diagram to represent the relation "is a square of" between the two sets.

(03 marks)

(b) What other relation ship can be obtained from the two sets?

(01 mark)

\*\*\* END \*\*\*