

Answer ALL questions in section A and only FIVE questions from section B.

SECTION A

- Express the recurring decimal $1.633\dots$ as a fraction in its simplest terms.
- Use a quadratic formula to show that the roots of the equation $x^2 + x - 6 = 0$ are 2 and -3
- Find the base x given that $35_x = 122_{\text{four}}$.
- Evaluate: $\frac{2}{3}$ of $\frac{\frac{1}{2} - \frac{1}{4}}{\frac{1}{5} \times \frac{1}{4}}$.
- Find the Highest Common Factor (HCF) of 9, 12 and 15
- Given that $h(a) = 9a^2 - 12a - 4$, find the value of
 - $h(-2)$.
 - $h(0)$
- A trader bought a television set at shs 450,000. She sold it at Shs 550,000. Calculate the percentage profit.
- It is given that $A = \{p, t, s, q, r\}$ and $B = \{p, q, u\}$.
 - Illustrate on a venn diagram the relationship between A and B
 - List the members of $A \cap B$
 - State $n(A \cap B)$
- Solve the inequality $1 - 4x < 9$ and
 - Write down its solution set (ii) show the solution set in (i) on a number line.