**GEORGIAN SECONDARY SCHOOL**

**MATHEMATICS FORM THREE TERM III CAT I 2017**

1. Make u the subject of the formula in the expression $\frac{1}{f}=\frac{1}{v}-\frac{1}{u}$ 3mks
2. Simplify the expression $\frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+ \sqrt{2}}$, giving your answer in the form a+b$\sqrt{c}$ 3mks
3. Find the equation of the line which passes through ( -1, -4) and is perpendicular to the line y +2x -4 =0 3mks
4. Expand (a+b)6. Hence, find the value of (0.98)6 correct to 4s.f 4mks
5. Given that A = $\left(\begin{matrix}4&3\\-1&2\end{matrix}\right)$ and C= $\left(\begin{matrix}14&7\\-4&2\end{matrix}\right)$ find B if A2 + B = C 3mks
6. Find the integral values of x for which 5$\leq $ 3x +2 and 3x – 14x < -2 3mks
7. The probability of a team losing a game is ¼. The team plays the game until it wins. Determine the probability that it wins in the fifth round 3mks
8. A triangle plot ABC is such that AB= 72m, BC =80m and AC =\*$ m.

Calculate the:

1. Area of the plot in square metres 3mks
2. Acute angle between AB and BC 3mks
3. The perpendicular height from A to the side BC 2mks