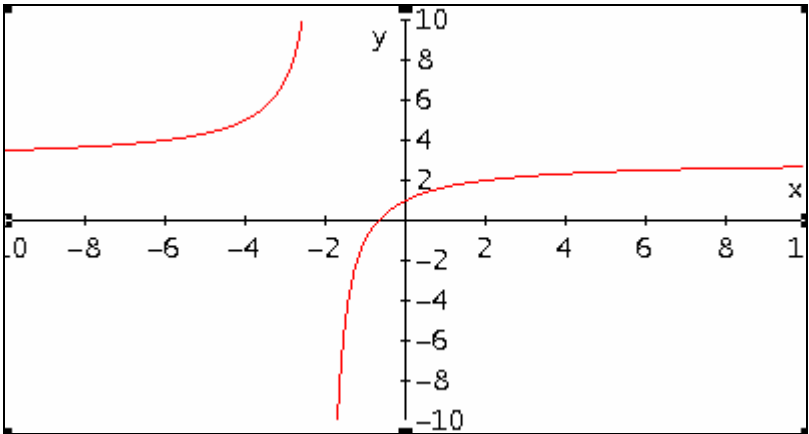


ANSWERS TO SEMESTER ONE EXAMINATION DECEMBER 2008 (JUNE 2008 INTAKE)

1	PROVE
2	$u^3 - 5u^2 + 6u = 0$; $x = 4, 6, 7$
3	$\frac{25}{3417}$
4	<p>Asymptotes : $y = 3$ and $x = -2$</p> <p>The curve crosses the axes at points : $(0,1), \left(\frac{-2}{3}, 0\right)$.</p> 
5	<p>i) $k = -3$; ii) $k = 2$; $\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} \frac{8-10t}{5} \\ \frac{1}{5} \\ t \end{pmatrix}$; iii) $x = 8, y = 1, z = -2$</p>