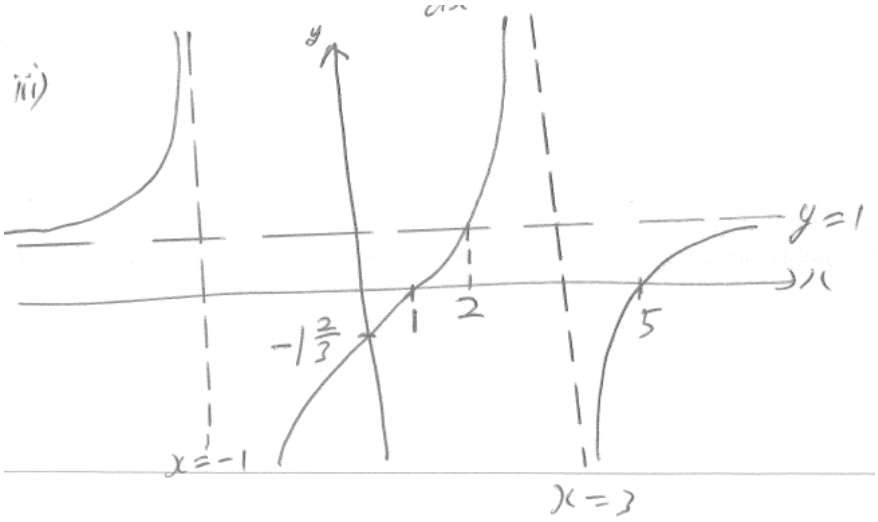
ANSWERS TO SEMESTER ONE EXAMINATION DEC 2011 (JUNE 2011 INTAKE)

1	3.56
2	$k = 1, l = -1$ $a = 1: x = -s - t, y = t, z = s,$ where $s, t \in \mathbb{R}$ $a = -1: x = t - s, y = t, z = s,$ where $s, t \in \mathbb{R}$ $a \neq -1, 1: x = 0, y = 0, z = 0$
3	Prove $\sum_{n=1}^{N} \frac{5n+6}{n(n+1)(n+2)} = 4 - \frac{3}{N+1} - \frac{2}{N+2}$; 4
4	Prove
5	(i) $y = 1\,, x = -1, x = 3$ (ii) Prove 
6	(i) $25u^4 - 36u^3 + 20u^2 + 4 = 0$; $S_2 = \frac{36}{25}$, $S_4 = \frac{296}{625}$, $S_{-2} = 0$, $S_{-4} = -10$ (ii) Prove