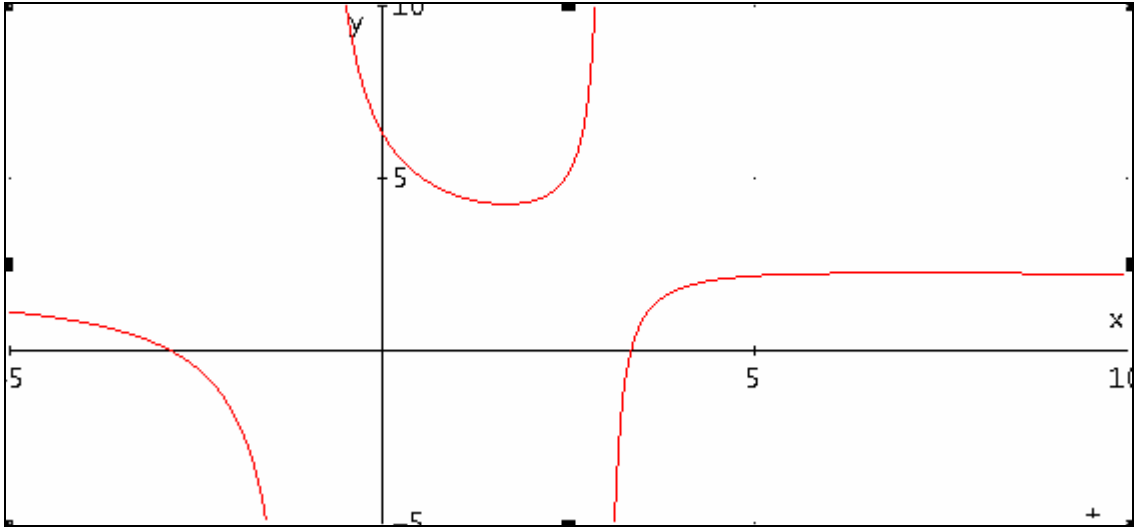


**ANSWERS TO SEMESTER ONE EXAMINATION DECEMBER 2006 (JUNE 2006 INTAKE)**

<b>1</b>	PROVE
<b>2</b>	<p>Asymptotes : <math>y = 2</math> , <math>x = -1</math> and <math>x = 3</math></p> <p>Minimum Point <math>\left(\frac{5}{3}, \frac{17}{4}\right)</math> ; Maximum Point <math>\left(7, \frac{9}{4}\right)</math> ;</p> <p>The curve crosses the axes at points : <math>\left(0, \frac{19}{3}\right), \left(\frac{1+\sqrt{153}}{4}, 0\right), \left(\frac{1-\sqrt{153}}{4}, 0\right),</math></p> 
<b>3</b>	<p>i) <math>\frac{-2}{3}\mathbf{i} + 3\mathbf{j} + \frac{5}{3}\mathbf{k}</math> ; (ii) <math>15x - 9y + 12z = -17</math> ; (iii) <math>\frac{19}{21}\mathbf{i} + \frac{130}{21}\mathbf{j} + \frac{44}{21}\mathbf{k}</math> ;</p> <p>(iv) <math>\frac{\sqrt{5659}}{21}</math></p>
<b>4</b>	$\frac{7}{5}$
<b>5</b>	<p>i) <math>4u^3 + 3u^2 + 9u - 16 = 0</math> ; <math>S_4 = \frac{-63}{16}</math> ; <math>S_6 = \frac{1065}{64}</math> ; <math>S_8 = \frac{-1695}{256}</math> ; (ii) PROVE</p>