ANSWERS TO SEMESTER ONE EXAMINATION JUNE 2007 (JANUARY 2007 INTAKE)

1	$\dfrac{n(n+1)(2n+1)\left(3n^2+3n-1\right)}{30}$
2	PROVE
3	$\dfrac{-16337}{3528}$
4	(i) $7x-y+4z=-7$; (ii) SHOW ; (iii) $3\sqrt{6}$
5	$61.9°$; (i) $\alpha=5$ and $\beta=3$; (ii) $\begin{pmatrix}5\\3\\10\end{pmatrix}+\lambda\begin{pmatrix}1\\2\\3\end{pmatrix}$; $\begin{array}{l}\pi_1:x+2y+3z=55\\\pi_2:x+2y+3z=27\end{array}$
6	Asymptotes : $y=2$, $x=1$ and $x=4$. Minimum Point $\left(-2,\dfrac{14}{9}\right)$; Maximum Point $(2,-2)$; The curve crosses the axes at points : $(0,2)$.