Math 201-143 Quiz 1 (A)

Name:..ID#:................................Sec:............Ser:...........

Q.1: Sketch the graph of the parametric equations $x = t^2 - 3$, $y = 4 - 3t$ and mark the direction in which the curve is traced for $-3 \leq t \leq 3$. Find equation of tangent line to the curve at $t = -1$. Also eliminate the parameter t to find corresponding cartesian equation.

t	x	y

Q.2: Find the exact length of the curve $x = 3 + 3t^2$, $y = 1 + 2t^3$ for $0 \leq t \leq 1$

Q.3: Convert the polar equation into cartesian equation and sketch its graph

$r = 2\sin\theta + 4\cos\theta$. Show the direction of the curve for $0 \leq \theta \leq 2\pi$.