Q1) (a) Find the parametric form of curve $x^2 + 4y^2 = 1$.

(b) Find the tangent vector to above curve at $P(\frac{\sqrt{3}}{2}, \frac{1}{4})$ and put it in unit vector form.

(c) Find directional derivative of $f(x, y) = x^2 + 2y^2$ in the direction of above tangent vector.