KFUPM MATH201 Quiz#1 Sec. 2

Name Sr.#

**Q1)**

(a) Eliminate the parameter to find a Cartesian equation of the curve.
(b) Sketch the curve and indicate with an arrow the direction in which the curve is traced as the parameter increases.

**18.** $x = \tan^2\theta, \quad y = \sec\theta,$ $-\pi/4 \le x \le \pi/4$

**Q2)**

**11–16** Find $dy/dx$ and $d^2y/dx^2$. For which values of $t$ is the curve concave upward?

**11.** $x = t^2 + 1, \quad y = t^2 + t$ **12.** $x = t^3 + 1, \quad y = t^2 - t$