Q.1: Eliminate the parameter $t$ from the parametric equations $x = \sec(t)$, $y = \tan(t)$ to find a cartesian equation. Sketch the graph and mark the direction in which the curve is traced for $\frac{-\pi}{2} < t < \frac{\pi}{2}$.

Q.2: Find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ for the parametric equations given in Question 1.

Q.3: Sketch the graph of the polar equation $r = 3 - 2\sin(\theta)$. 