Q1. Verify that $y = \tan(x+c)$ is a one parameter family of solution of $y' = 1 + y^2$. Find explicit solution of the IVP $y' = 1 + y^2$ with $y(0) = 0$. Tell if the solution of the IVP is defined on $(-2, 2)$ and give justification.

Q2. Verify that $p = ce^t/(1+ce^t)$ is a one parameter family of solutions of $dp/dt = p(1-p)$. Give an appropriate interval of definition.