Math 152 – Spring 2016 – In-class Group Assignment 18 – April 20, 2016.

The Gompertz growth model is often used to describe the growth of tumors or of populations of cells. If x(t) gives the size of a tumor, then the differential equation describing Gompertz growth can be written as

$$\frac{dx}{dt} = x\,(k - \alpha \ln(\frac{x}{x_0}))$$

Here $x(0) = x_0 > 0$.

Find all the equilibria of this model and determine whether each equilibrium is stable.