

Problem 27

Consider the initial value problem

$$y' = ty(4 - y)/3, \quad y(0) = y_0.$$

- (a) Determine how the behavior of the solution as t increases depends on the initial value y_0 .
- (b) Suppose that $y_0 = 0.5$. Find the time T at which the solution first reaches the value 3.98.