

Problem 27

Consider the equation $ay'' + by' + cy = d$, where a , b , c , and d are constants.

- (a) Find all equilibrium, or constant, solutions of this differential equation.
- (b) Let y_e denote an equilibrium solution, and let $Y = y - y_e$. Thus Y is the deviation of a solution y from an equilibrium solution. Find the differential equation satisfied by Y .