

HOMEWORK 5

1. For the following autonomous ODEs, find the equilibriums, sketch a few trajectories of the solution and determine the stability.

(a) $y' = 2y - 6$

(b) $y' = 10 - 5y$

(c) $y' = y(y^2 - 4)$

(d) $y' = y^2(9 - y^2)$

2. Given the graph of $f(y)$ versus y , find the equilibriums of the ODE $y' = f(y)$, draw the phase line and determine the stability.

