

Quiz 11, Math 246, Professor David Levermore
Thursday, 10 December 2020

This formative assessment helps you see how well you understand the material. To get an accurate assessment please do not use books, notes, or electronic aids. Show your reasoning for full credit. Good luck!

- (1) [5] Consider the system

$$x' = -4x + 2y, \quad y' = 5x - y - 3x^2.$$

Its stationary points are $(0, 0)$ and $(1, 2)$. Classify the type and stability of each of these stationary points. (You do not have to sketch anything.)

- (2) [5] Consider the planar system

$$u' = 3u - v, \quad v' = 2u + v - 5u^2.$$

Its stationary points are $(0, 0)$ and $(1, 3)$. Classify the type and stability of each of these stationary points. (You do not have to sketch anything.)