

MATH 63CM HOMEWORK 7

DUE 11:59PM ON SUNDAY, MAY 26

1. Prove that the system

$$\begin{aligned}x' &= 3x - y - xe^{x^2+y^2}, \\y' &= x + 3y - ye^{x^2+y^2}\end{aligned}$$

has a (nonconstant) periodic orbit.

From the text: 5.1, 5.2, 5.3, 5.5.