

Math 142-2, Group work 5

Problem 1

Five energy levels for a system are shown in the phase plane below. (a) List the energy levels (red, orange, green, blue, violet) in order from lowest energy to highest energy. (b) Mark all stable (“•”) and unstable (“o”) equilibria. (c) Sketch energy contours corresponding to all unstable equilibria (energy contours may contain more than one component; be sure to sketch them all). (d) Add arrows to all contours, including the ones you have added. (e) Sketch the potential energy function and show the energy levels corresponding to the five colored energy contours.

