

Math 383/683
 Quiz #1

1. Consider the following three potential bifurcation diagrams for a differential equation $\dot{x} = f(x, \mu)$. For each diagram circle all bifurcation points in the (μ, x) -plane and classify them as saddle-node, transcritical, subcritical pitchfork, or supercritical pitchfork, or argue why the resulting diagram is impossible.

