

7. [12 points] For each of the following, give an example as indicated, and a short (one or two sentence) explanation for how your example satisfies the indicated criteria.
- a. [4 points] Give an example of an autonomous first-order differential equation with two equilibrium solutions, neither of which are stable.
- b. [4 points] Give an example of a linear, constant-coefficient system of two differential equations whose phase portrait is a stable counterclockwise spiral.
- c. [4 points] Give an example of a linear, constant-coefficient system of two differential equations that has a critical point that is not at the origin.