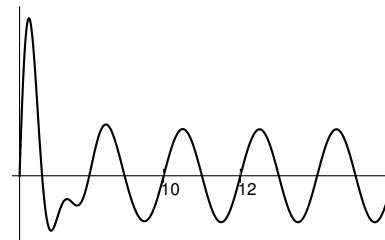


2. [12 points] For each of the following, give an example, as indicated.

a. [4 points] Give a first-order differential equation that could have the phase line shown to the right.



b. [4 points] Give a second-order, linear, constant-coefficient, nonhomogeneous differential equation that could have the response shown to the right.



c. [4 points] Give a system of two linear, first-order, constant-coefficient differential equations which have an isolated critical point at the origin that is an unstable saddle point.