

Using Simulink, simulate  $4\ddot{x} + 1.2\dot{x} + 8x = 0$  with the initial condition of  $x = 5$ , for 100 s. Plot  $x(t)$  vs. time,  $\dot{x}(t)$  vs. time, and the phase plot  $\dot{x}(t)$  vs.  $x(t)$ . Show your Simulink simulation model.