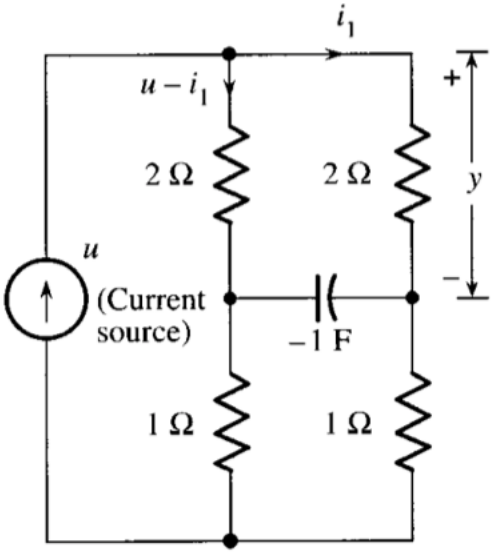
Question 2:

Consider the below system where input is current source. The output y is the voltage across the 2-ohm resistor. Find the transfer function of the system and whether the given system is stable or not? Give Reasons for your answer?

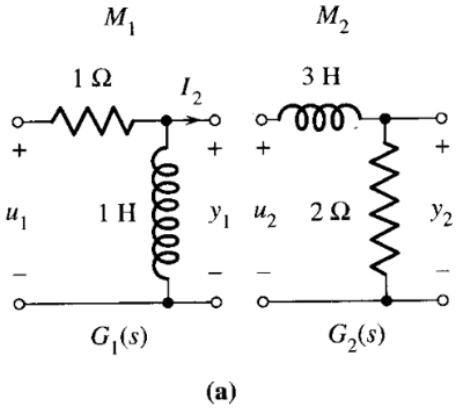


Question 3:

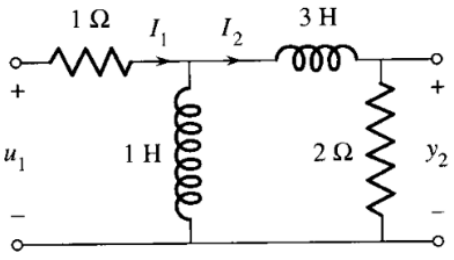
Consider the networks shown in fig (a). The transfer function from u_1 to y_1 of network M_1 is $G_1(s)=s/(s+1)$. The transfer function from u_2 to y_2 of network M_2 is $G_2(s)=2/(2+3s)$. Now we connect them together i.e; $y_1=u_2$ fig(b)

Answer the following questions?

A) Compute the transfer function from u_1 to y_2
B) Determine the Natural Frequency
C) Determine the Damping ratio
D) Write the MATLAB CODE for the above-mentioned questions



(a)



(b)