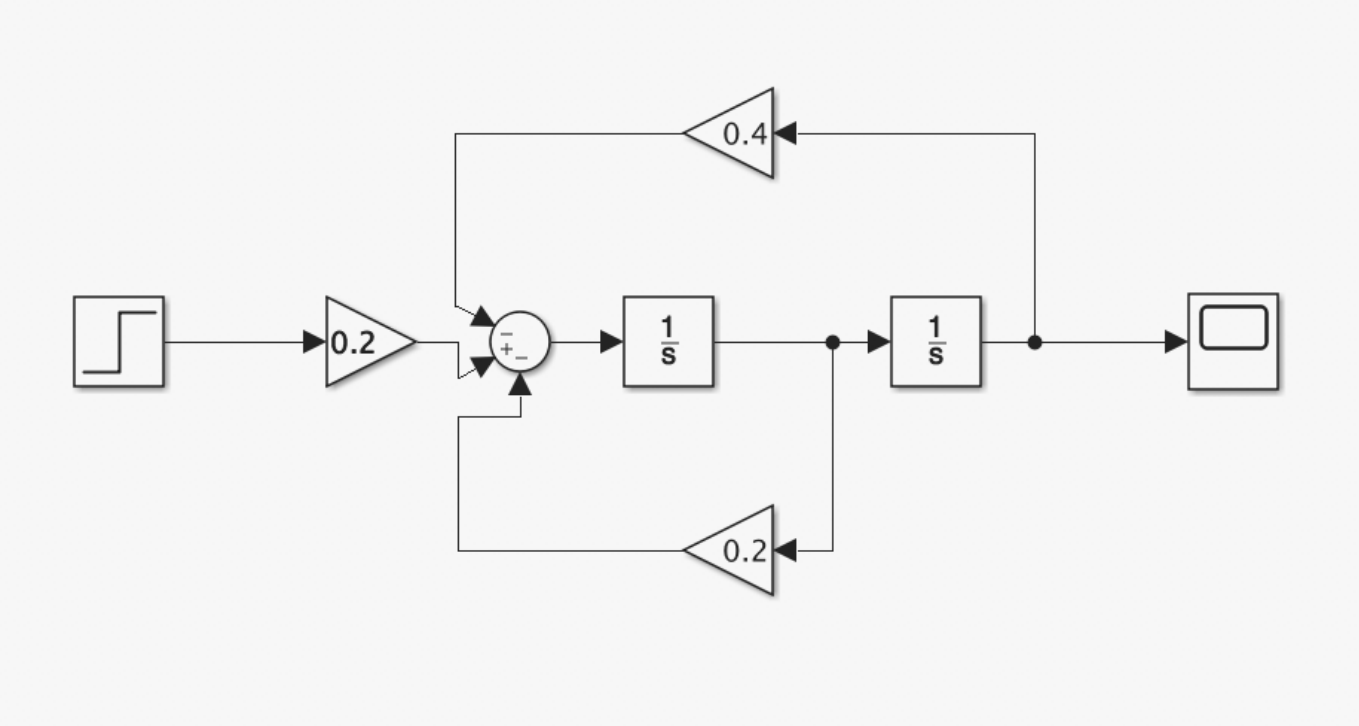
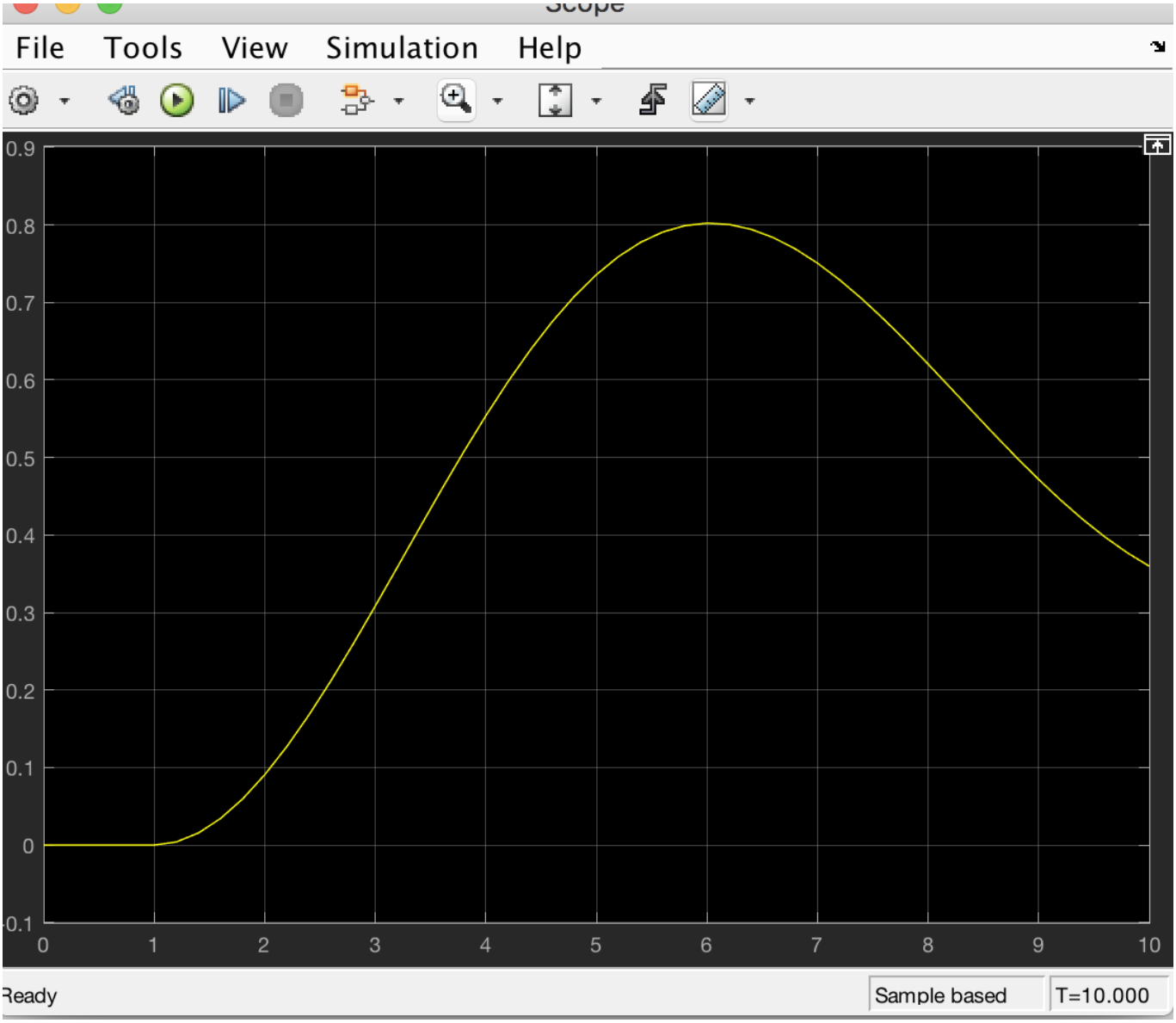
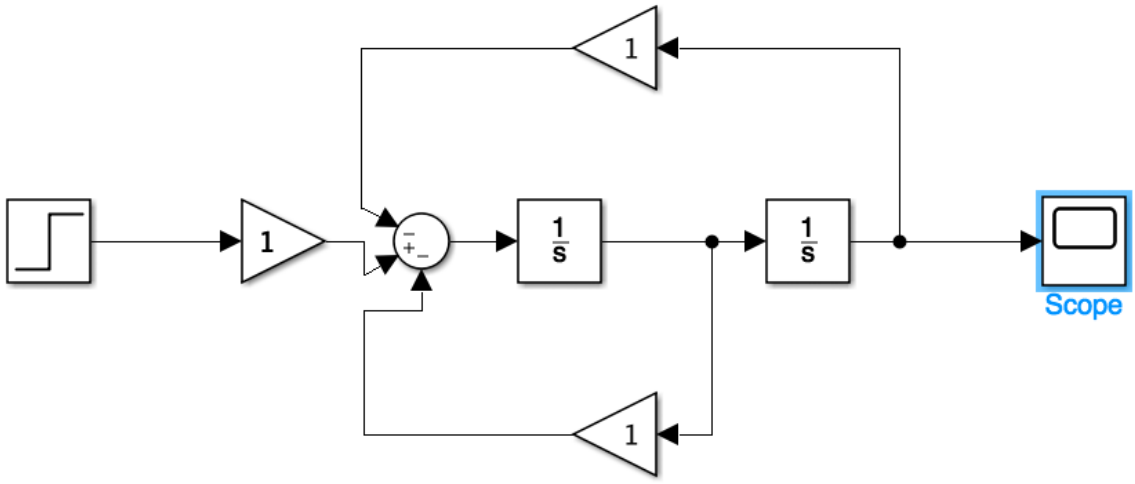
MATLAB Project#4 (Intelligent Systems-Summer 2019)

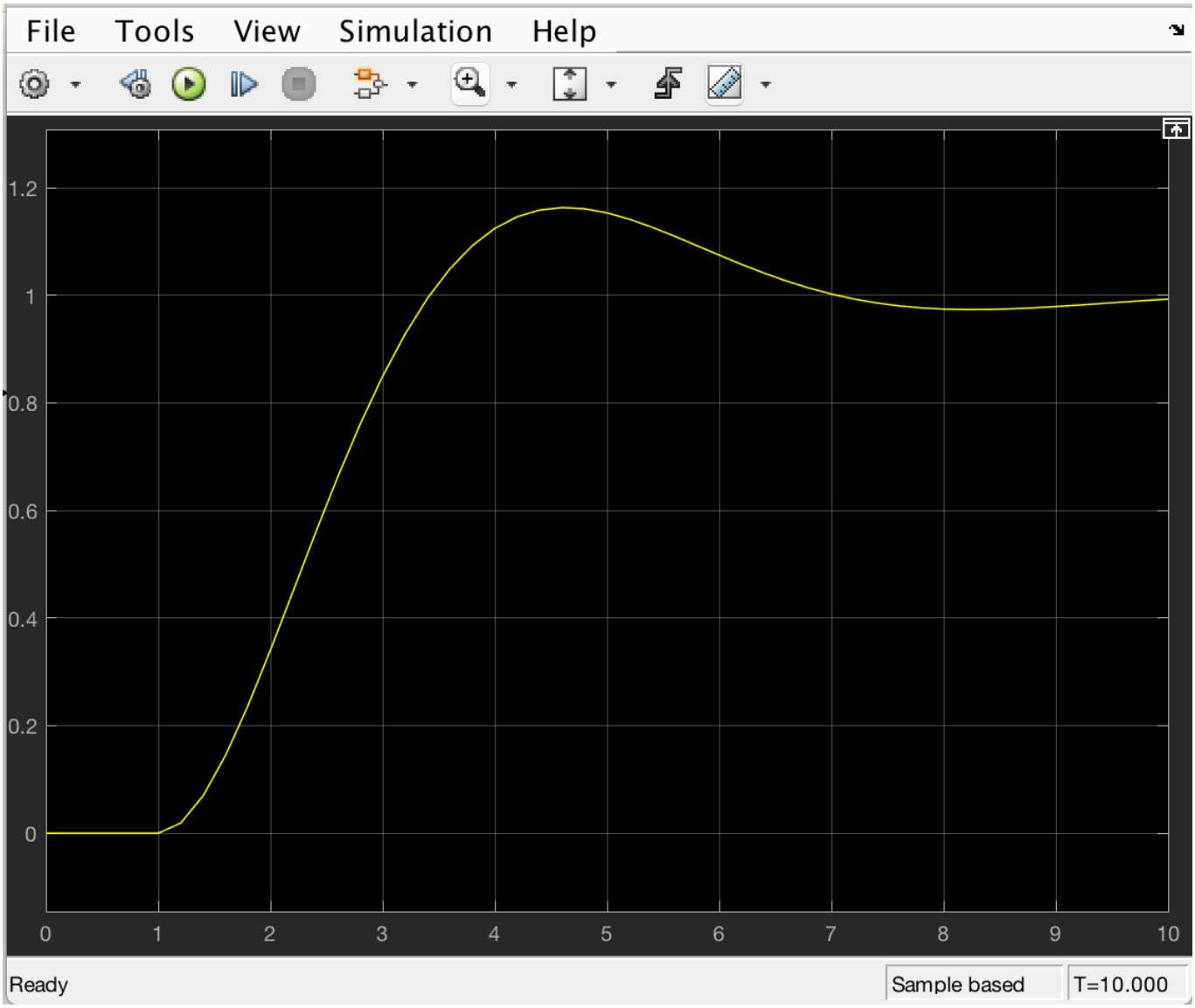
Problem#1:Let's select c/m = 0.2, k/m = 0.4 and 1/m = 0.2 for the figure 2. Select x(0) =1 and x(0) = 0. Simulate the model for step input.



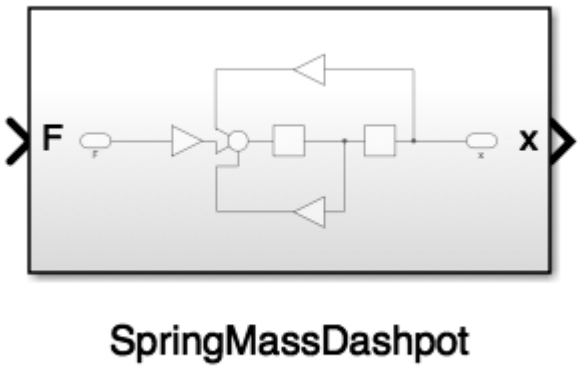


Problem#2:Let's select c/m = 1, k/m = 1 and m = 1. Repeat problem#1



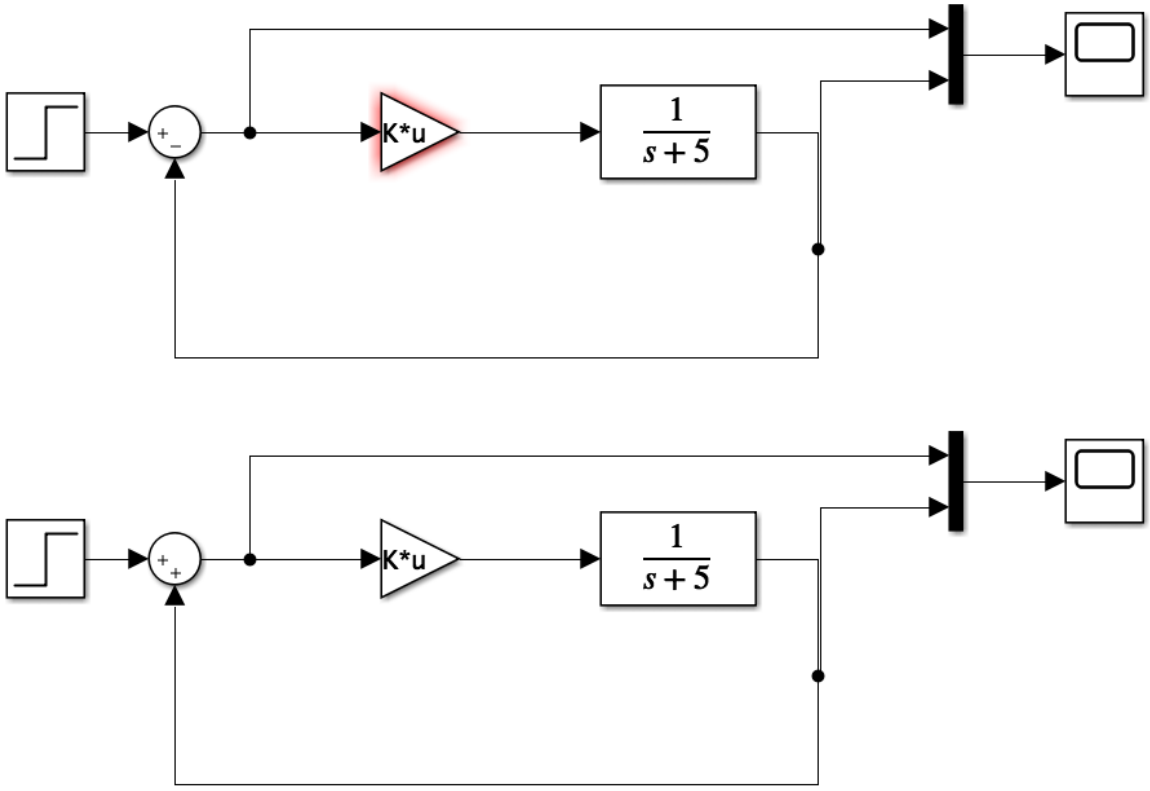


Problem#3:Draw the diagram for problem#1 in one block (as shown in figure3) then repeat the simulation.

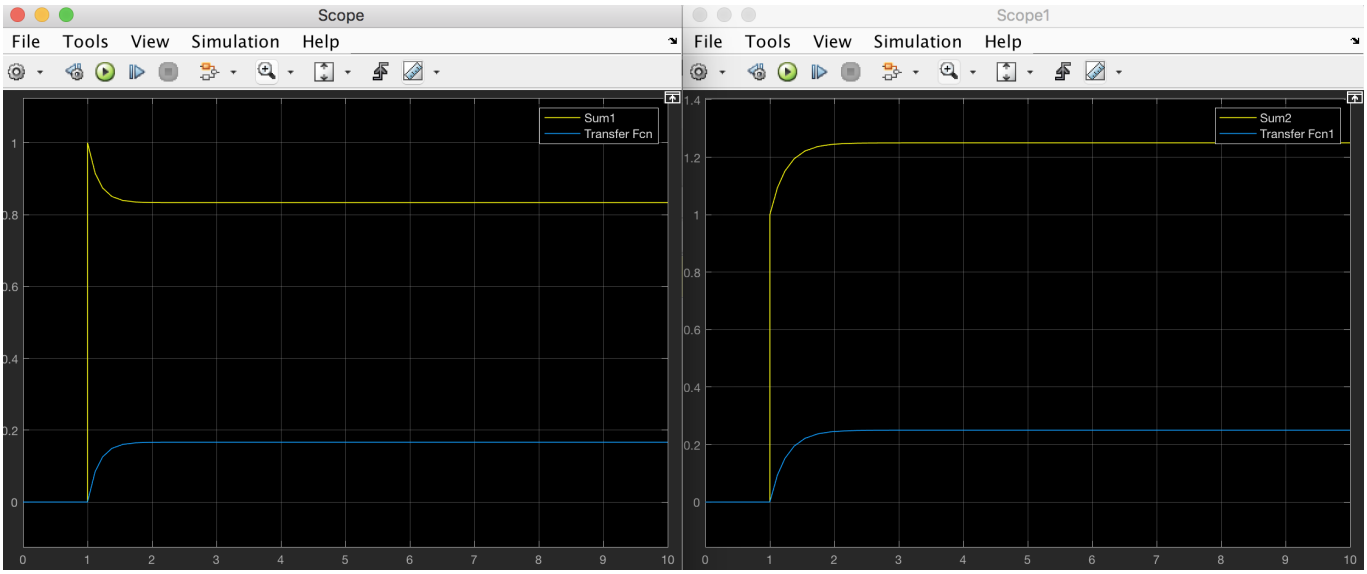


Problem#4:

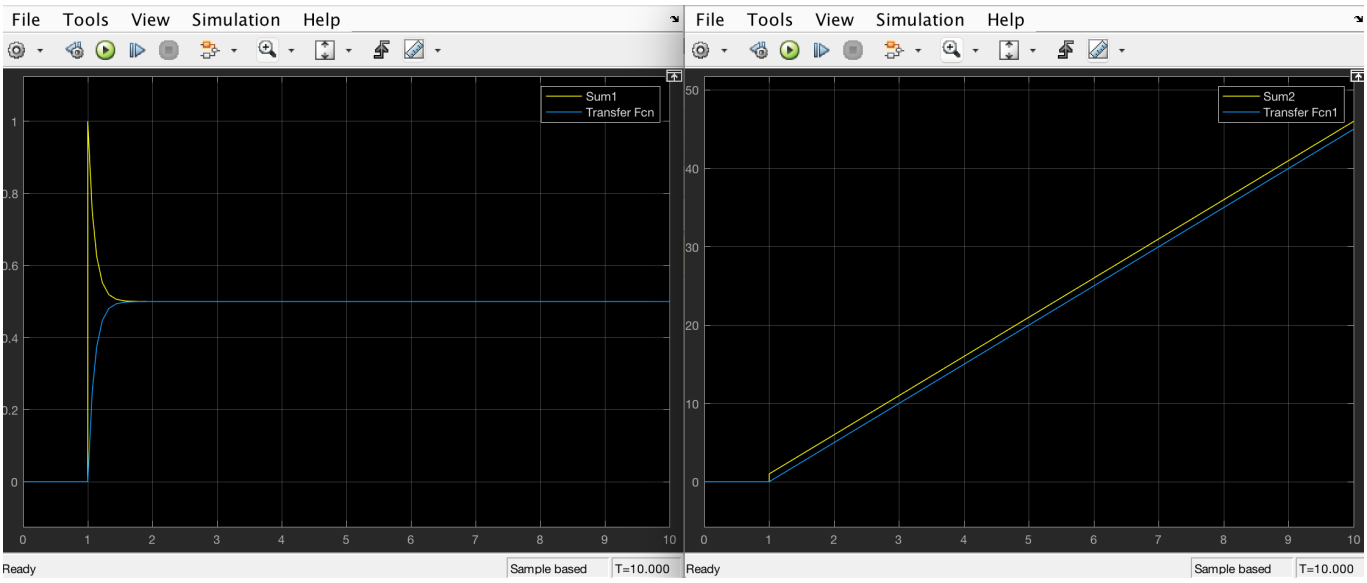
(I)Select k = 1, 5, 10 for positive and negative feedback systems. Observe the output with the step input. What is the effect ofk to the output response?



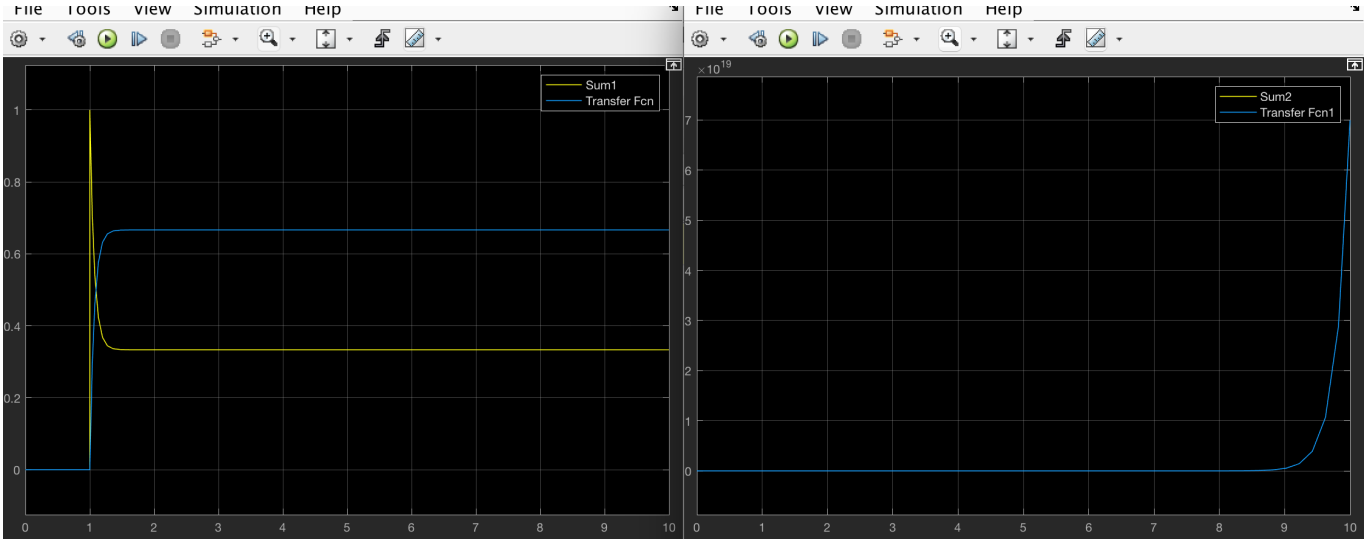
K=1:



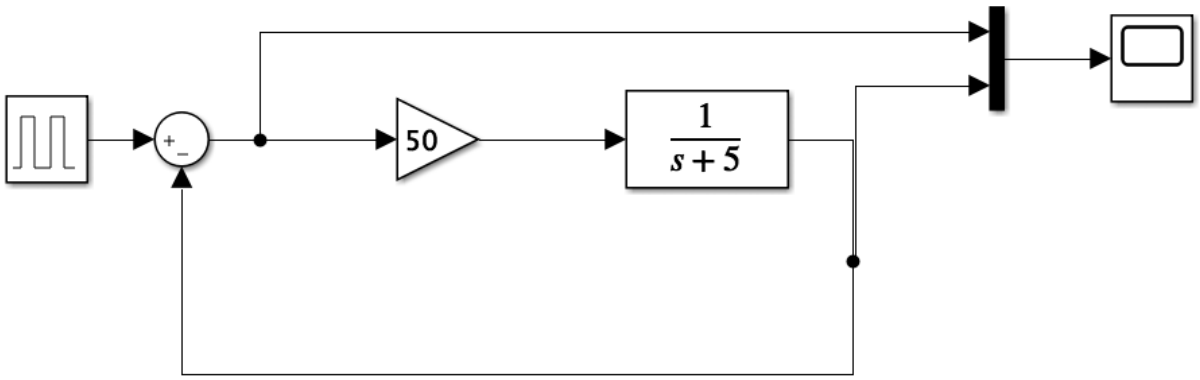
K=5:

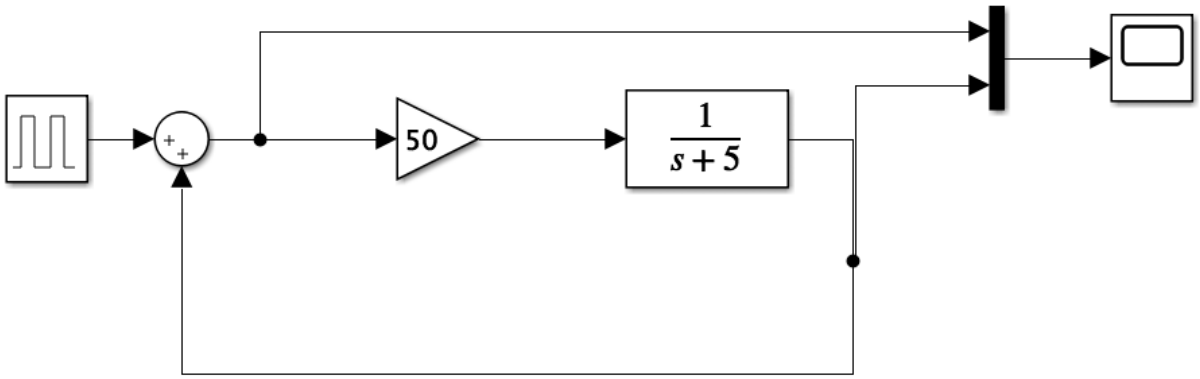


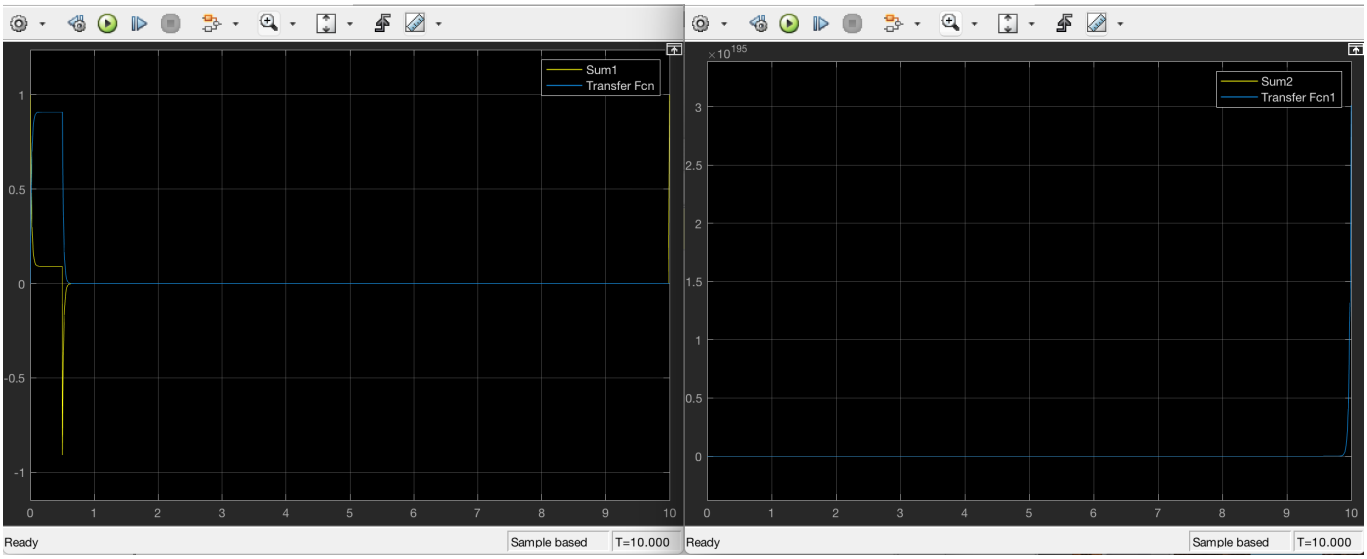
K=10:



(II) change your input to a pulse generator(Select the value of your input p parameters as desire). Show your output for K=50


50
1
s + 5


50
1
s + 5


Sum1
Transfer Fcn
Ready
Sample based
T=10.000
Sum2
Transfer Fcn1
Ready
Sample based
T=10.000