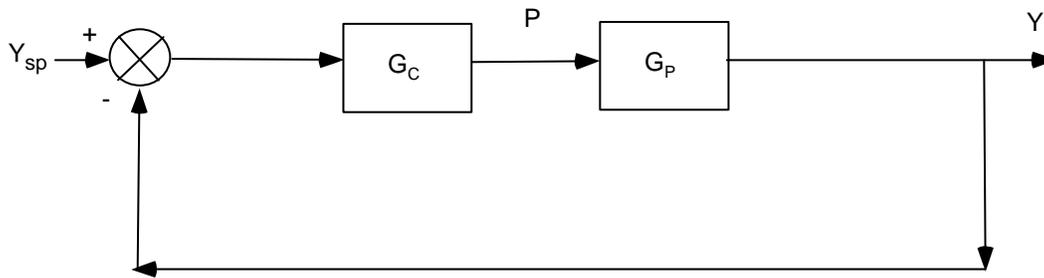


Ch En 436
Special Problem 13
(in class)

Name _____



$$G_c = K_c; \quad G_p = \frac{0.5}{(s+1)(0.5s+1)}$$

For the above system, answer the following questions:

1. What is the overall transfer function relating Y to Y_{sp} ?
2. Will Y exhibit underdamped, overdamped, or critically damped response for K_c values of 0.16, 0.25, and 0.50?
3. Is there a value of K_c that will cause Y to show unstable response?
4. Is this a reverse acting or a direct acting controller?
5. Make a root locus diagram for this system with values of K_c ranging from -3 to 3.