Digital Controls EE552 Dec. 4, 2009
Quiz 5 - tables on next sheet

Problem 1

Given the system above and \( G(s) = \frac{4}{s(s+2)} \) and \( H(s) = 1 \)

1. Find the steady state errors for with \( R(s) = \frac{2}{s}, \frac{2}{s^2}, \frac{2}{s^3} \).
2. Design a lag controller to improve the finite error by a factor of 5.

Problem 2

Given unity feedback system and \( G(z) = \frac{0.1(z+0.5)}{(z-0.25)(z-0.75)} \) and \( H(z) = 1 \). Find the steady state error to a unity ramp, step and parabolic inputs.