System Modeling, Dynamics and Control

Tutorial 7, Autumn Semester, 2006

1. Sketch the locus of closed-loop poles of a unity feedback systems having the following forward-loop transfer functions.

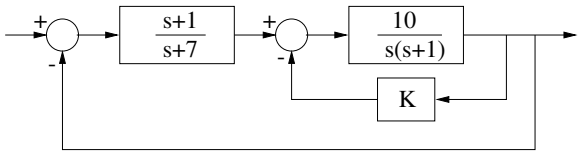
   (a) $G(s) = Ks^{-1}(s^2 + 6s + 25)^{-1}$.

   (b) $G(s) = Ks^{-1}(s^2 + 4s + 5)^{-1}$.

   (c) $G(s) = K(s + 1)s^{-2}(s + 3.6)^{-1}$.

   (d) $G(s) = 10(s + K)[s(s + 8)(s + 1)]^{-1}$.

2. Sketch the locus of closed-loop poles of the following system as the feedback gain K varies.



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