

1. a) Use all 10 rules to plot the root locus of $GH=K/(s^2(s+3)(s+8))$
- b) Use all 10 rules to plot the root locus of $GH=K(s+1)/(s^2(s+3)(s+8))$
2. a) Use all 10 rules to plot the root locus of $GH=K(s^2+6s+18)/(s(s+1)(s+8)^2)$
- b) **SKETCH!!!** (do not use all 10 rules) the form of the root locus for the following open-loop transfer functions:
 - i) $GH=K/((s+2)(s+6))$
 - ii) $GH=K/((s+4)(s^2+6s+13))$
 - iii) $GH=K(s+10)/(s(s^2+16s+100))$
 - iv) $GH=K/(s^2(s+2)(s+8))$
 - v) $GH=K/((s+1)^2(s+2)(s+8))$
 - vi) $GH=K(s+4)^2/(s(s^2+4s+8))$

Remember, if you are truly stuck you can use the Matlab command rlocus().