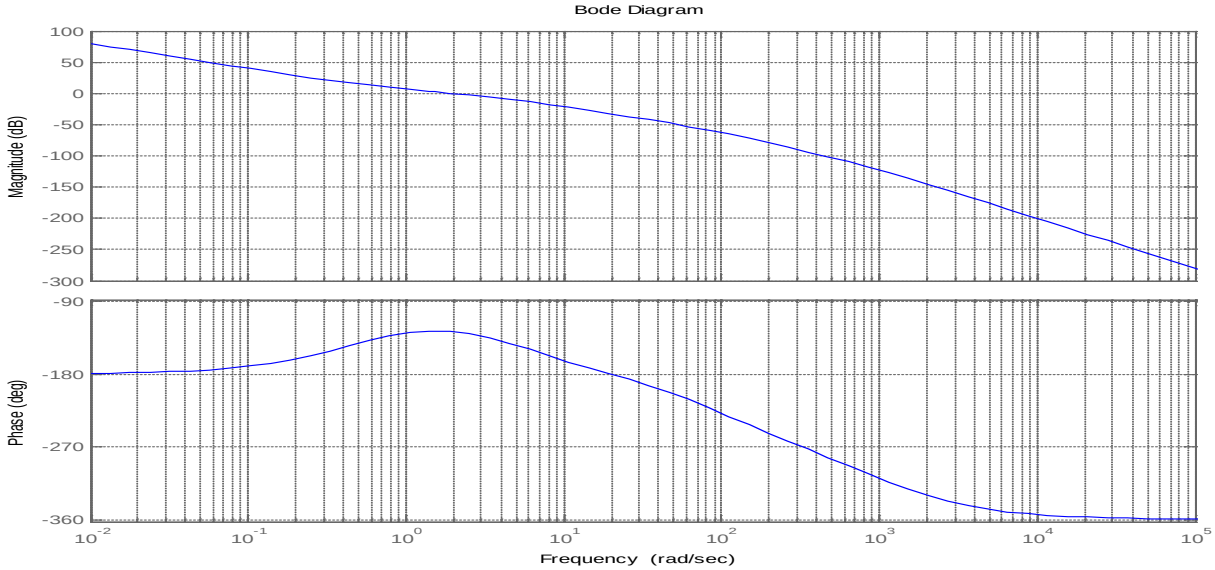
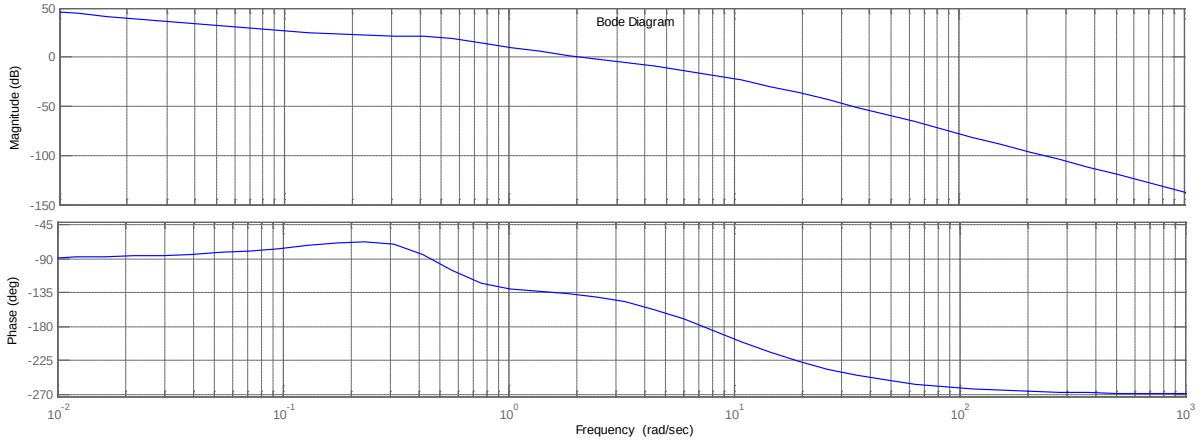
Do: 9-6, 9-8, 9-9(c,d,g), 9-28

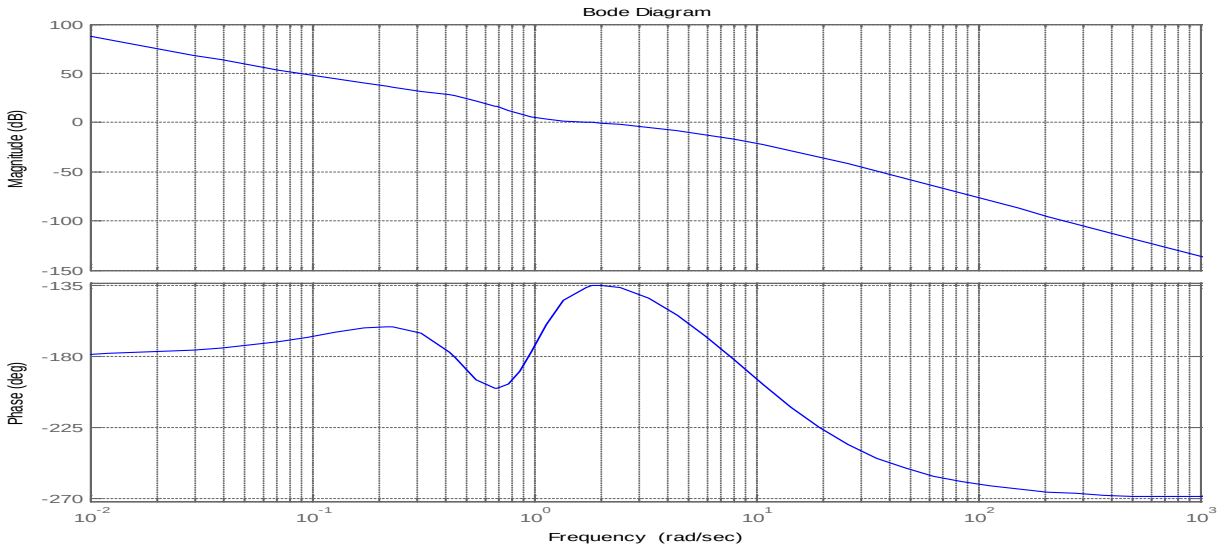
Consider the standard unity gain feedback set up. The frequency response of the forward path gain is given by the follow Bode plots. For each case:

a) Determine the system type and find closed-loop steady state tracking errors if the reference input is either a step or a ramp or a unit acceleration signal.

b) Find ω_{gc}, ω_{pc}, GM and PM. Determine closed loop system stability. How much can the system gain be adjusted (both increase and decrease) before losing stability.



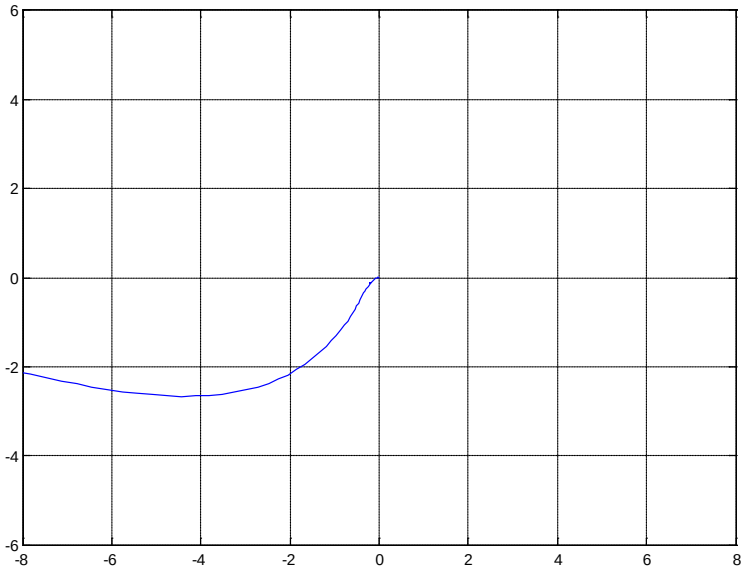


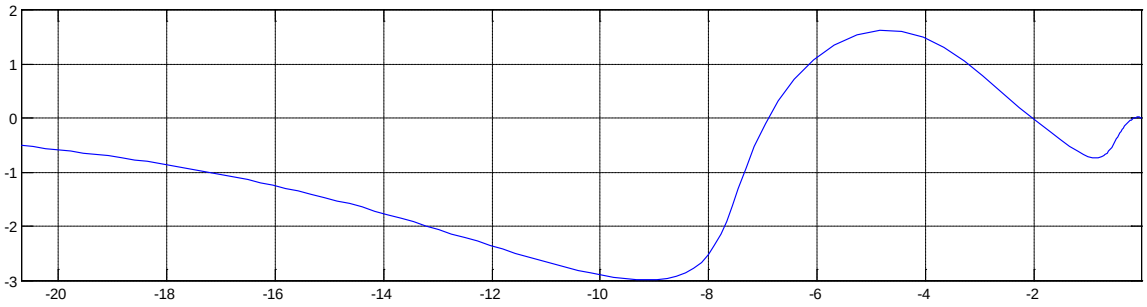


Consider the standard unity gain feedback set up. The frequency response of the forward path gain is given by the follow Nyquist plots. For each case:

a) Determine the system type and determine if the closed-loop steady state tracking error would be 0, finite but nonzero, or infinity when the reference input is either a step or a ramp or a unit acceleration signal.

b) Find GM and PM. Determine closed loop system stability. How much can the system gain be adjusted (both increase and decrease) before losing stability.

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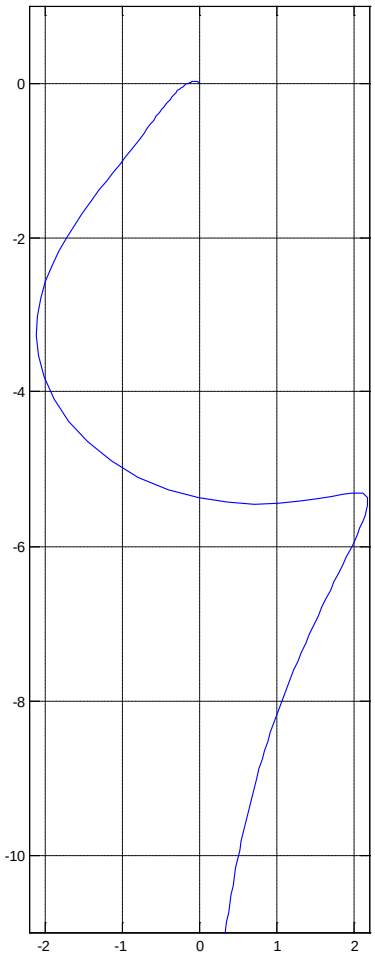
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