



### Sheet 3

## Feedback and Stability

Draw the amplitude and phase curves, Bode plots, as a function of frequency for the following loop transfer functions:

1.  $G(s)H(s) = \frac{100}{s^2}$

2.  $G(s)H(s) = \frac{s}{s+10}$

3.  $G(s)H(s) = \frac{10(s+10)}{s+1}$

4.  $G(s)H(s) = \frac{0.1s+1}{s+1}$

5.  $G(s)H(s) = \frac{10s}{0.1s+1}$

6.  $G(s)H(s) = \frac{s+1}{s(0.1s+1)}$

7.  $G(s)H(s) = \frac{2}{s}$

8.  $G(s)H(s) = \frac{1}{s(s+8)}$

9.  $G(s)H(s) = \frac{1}{(s+5)(s+10)}$