1. Draw the asymptotic Bode diagram (magnitude and phase angle) of the following transfer functions

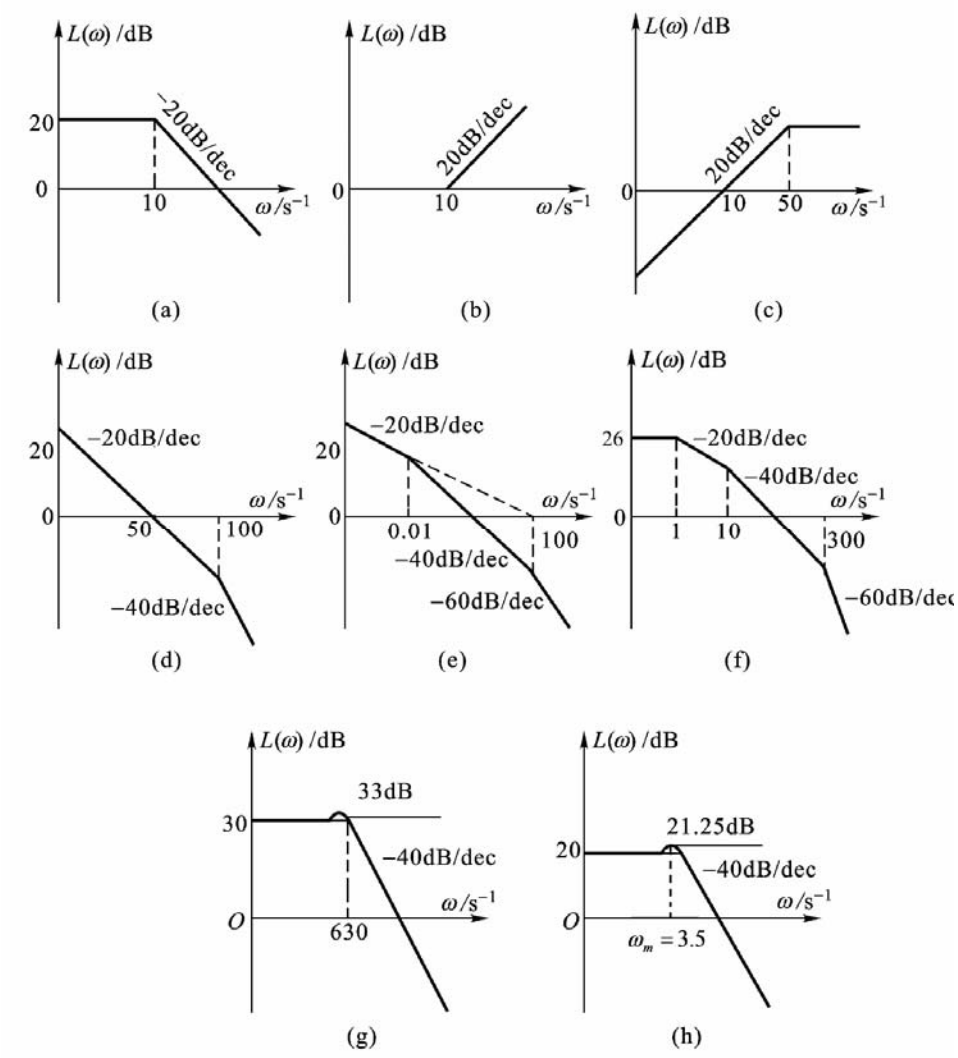
（1） $G(s)=\dfrac{2}{(2s+1)(8s+1)}$

（2） $G(s)=\dfrac{50}{s^2(s^2+s+1)(6s+1)}$

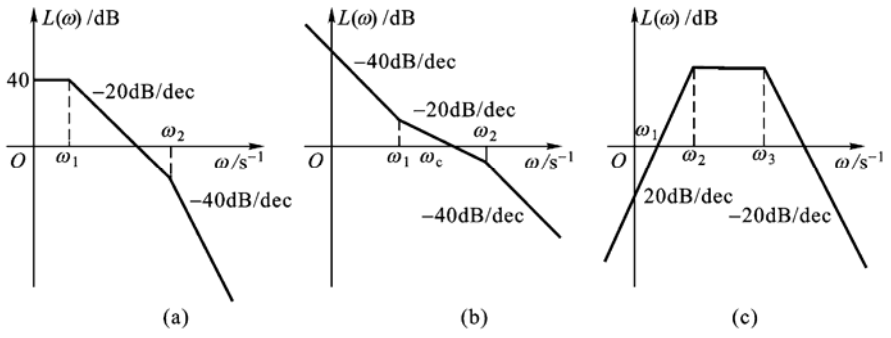
（3） $G(s)=\dfrac{10(s+0.2)}{s^2(s+0.1)}$

（4） $G(s)=\dfrac{8(s+0.1)}{s^2(s^2+s+1)(s^2+4s+25)}$

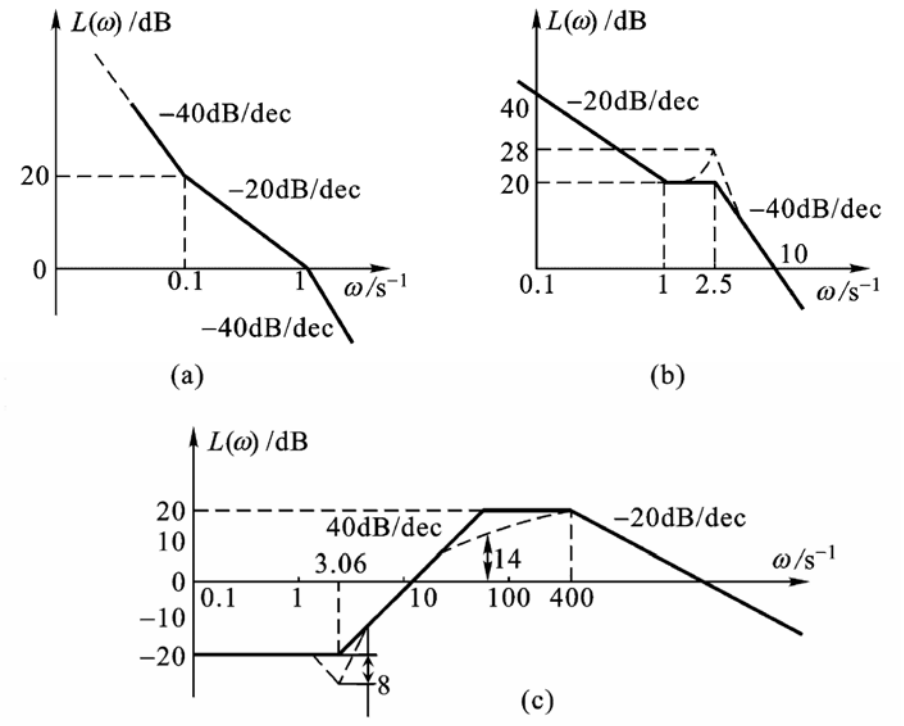
2. The Bode asymptotic magnitude curves of some minimum phase transfer functions are shown below. Determine their transfer functions.



3. The Bode asymptotic magnitude curves are shown below. Determine their transfer functions.



4. The Bode asymptotic magnitude curves are shown below. Determine their transfer functions.



5. Sketch the polar plots of the following transfer functions:

1) $G(s)=\dfrac{2}{(2s+1)(8s+1)}$

2) $\mathrm{G}(s)=\dfrac{s^3}{(s+1)^2}$

3) $G(s)=\dfrac{50}{(0.2s+1)(s+2)(s+0.5)}$