Use AC analysis to calculate the gain for the circuit shown at right for  $\omega=100$  rad/s,  $10^3$  rad/s ,  $10^4$  rad/s, and  $10^5$  rad/s. Note that since  $\underline{v_o}$  will be complex, the gain will also be complex.

$$v_i \circ \frac{C_1}{1.5 \, \mu \text{F}} \stackrel{R_1}{\downarrow} \frac{C_2}{15 \, \text{k}\Omega}$$

$$G = \frac{\tilde{v}_o}{\tilde{v}_i}$$

Express the answers in magnitude / phase form.

$$\omega = 10^2 \text{ rad/s}$$
:  $G =$ 

$$\omega = 10^3 \text{ rad/s}$$
:  $G =$ 

$$\omega = 10^5 \text{ rad/s}$$
:  $G =$