$\qquad$

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

$$
G=\frac{\tilde{v}_{o}}{\tilde{v}_{i}}
$$



Express the answers in magnitude / phase form.
$\omega=10^{2} \mathrm{rad} / \mathrm{s}: G=$ $\qquad$
$\omega=10^{3} \mathrm{rad} / \mathrm{s}: G=$ $\qquad$
$\omega=5 \times 10^{4} \mathrm{rad} / \mathrm{s}: G=$ $\qquad$
$\omega=10^{5} \mathrm{rad} / \mathrm{s}: G=$ $\qquad$

