1. Given \( \omega = 1 \text{k rad/sec} \), find \( Z_{ab} \).

2. Find a frequency, \( \omega \), that causes \( Z \) to be real (i.e. imaginary part equals zero). \( \omega \neq 0 \) or \( \omega \neq \infty \).
3.

a. Find the phasor value for V(t).

b. Draw the frequency-domain circuit diagram, including the phasor value for V(t) and the impedance values for components.

b. Find the phasor value for i(t).

4.

Find \( i_1(t) \).