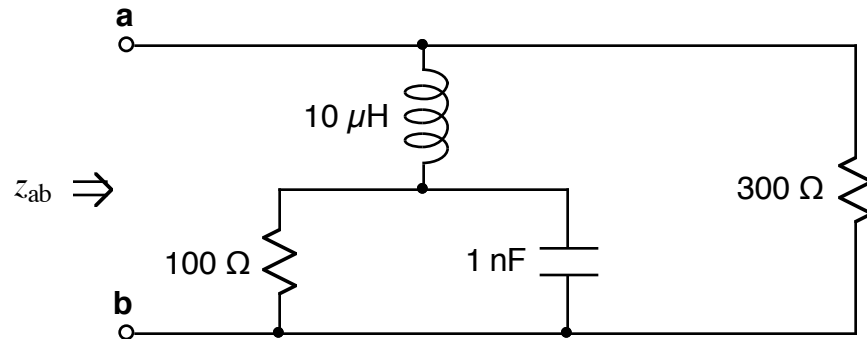
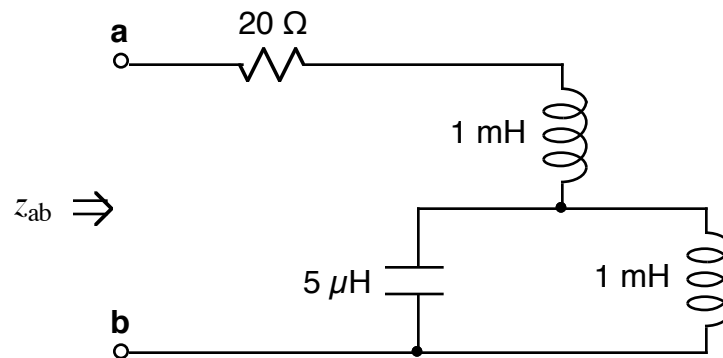


1.



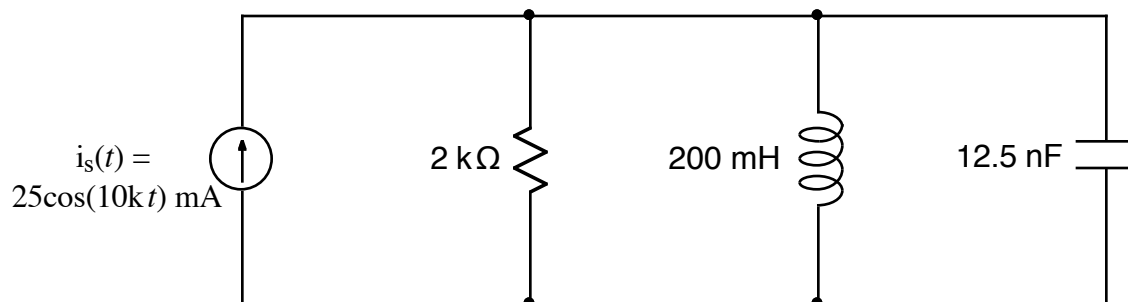
Given  $\omega = 10 \text{ M rad/s}$ , find  $z_{ab}$ .

2.



Find a frequency,  $\omega$ , that causes  $z_{ab}$  to be real, (i.e., imaginary part equals zero).

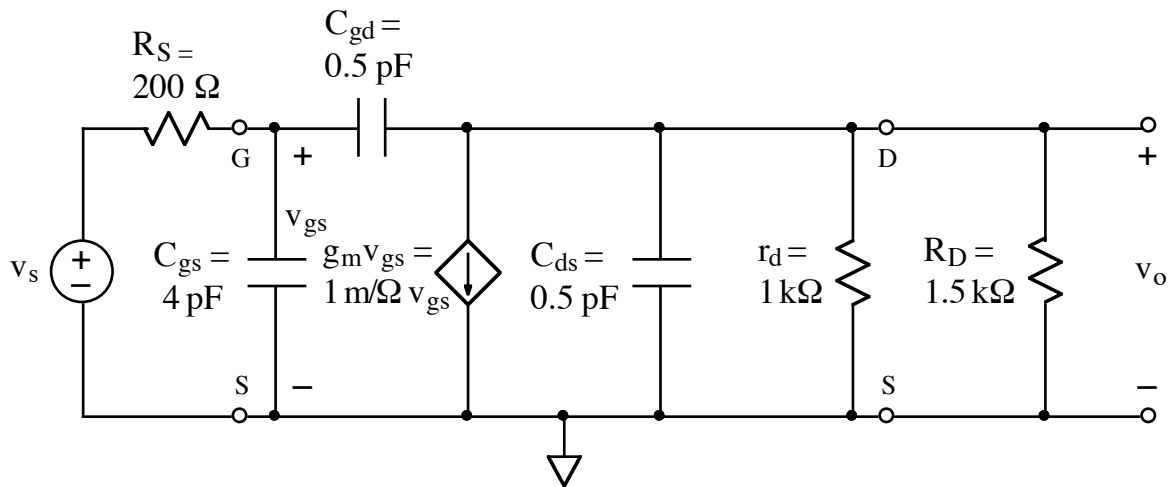
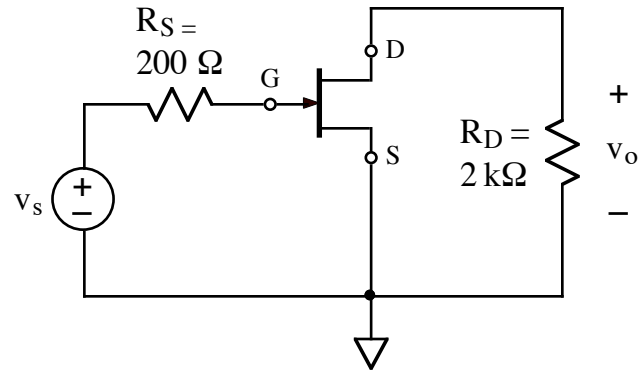
3.



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

4. Find the phasor value for  $i_L(t)$  for prob 3, (measurement arrow points down).

5.



$$v_s(t) = 2 \cos(10kt) \text{ V}$$

The above circuit diagrams show a common-source JFET amplifier and its high-frequency equivalent circuit. Find  $v_o(t)$ .