a. Find values of *R* and *C* such that a *series R-C* combination would have an impedance of $Z = 4 k\Omega - j3 k\Omega$. The frequency is $\omega = 10^5$ rad/s.

R = _____; *C* = _____;

b. Find values of *R* and *C* such that a parallel *R*-*C* combination would have an impedance of $Z = 4 k\Omega - j3 k\Omega$. The frequency is $\omega = 10^5$ rad/s.

R = _____; *C* = _____;

c. Find values of *R* and *L* such that a *series R-L* combination would have an impedance of $Z = 4 k\Omega + j3 k\Omega$. The frequency is $\omega = 10^5$ rad/s.

R = _____; *L* = _____

d. Find values of *R* and *L* such that a parallel *R*-*L* combination would have an impedance of $Z = 4 k\Omega + j3 k\Omega$. The frequency is $\omega = 10^5$ rad/s.

R = _____; *L* = _____