

PROB: The center frequency, ω_0 , for an *RLC* filter satisfies the following equation:

$$\omega_0 L - \frac{1}{\omega_0 C} = 0$$

The following information is given:

$$f_0 = \text{_____} \text{ (center frequency in Hz supplied by instructor)}$$

$$\omega = 2\pi f \text{ (to convert frequency in Hz to rad/s)}$$

$$L = 0.1 \text{ H}$$

Find the value of C for the center frequency f_0 .

$$C = \text{_____}$$

Hint: Solve the center frequency equation for C using simple algebraic steps.