

8. We find the inductance from $f = \omega/2\pi = (2\pi\sqrt{LC})^{-1}$.

$$L = \frac{1}{4\pi^2 f^2 C} = \frac{1}{4\pi^2 (10 \times 10^3 \text{ Hz})^2 (6.7 \times 10^{-6} \text{ F})} = 3.8 \times 10^{-5} \text{ H} .$$