Problems discussed in the videos:

Video (1)
A circuit contains an alternating power source (peak voltage = 170 V) and a resistor (resistance = 120 Ω).
(A) Find the power source's root-mean-squared voltage.
(B) Find the root-mean-squared current.
(C) Find the average power delivered by the power source.

Videos (3)-(5)
A 120 V, 60 Hz AC power outlet is connected to a 1.53×10^{-3} H inductor, a 1.67×10^{-2} F capacitor, and a .329 Ω resistor, all in series. Find X_L, X_C, Z, I_{rms}, and the rms voltage across the capacitor. Find the resonant frequency f_0.