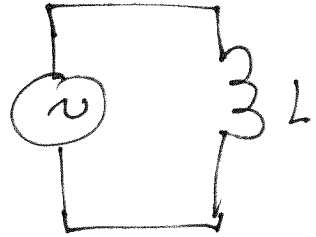


Ch. 15 Prob. 32

$$L = 40 \text{ mH}$$

$$f = 60 \text{ Hz}$$

$$V_0 = 50 \text{ V}$$



Find the voltage across the inductor.

Since there is only an inductor present, the voltage across it matches the voltage of the power supply.

The AC voltmeter will measure rms not peak voltage

$$\therefore V_{\text{rms}} = \frac{V_0}{\sqrt{2}} = \frac{50 \text{ V}}{\sqrt{2}} = \boxed{35.4 \text{ V}}$$