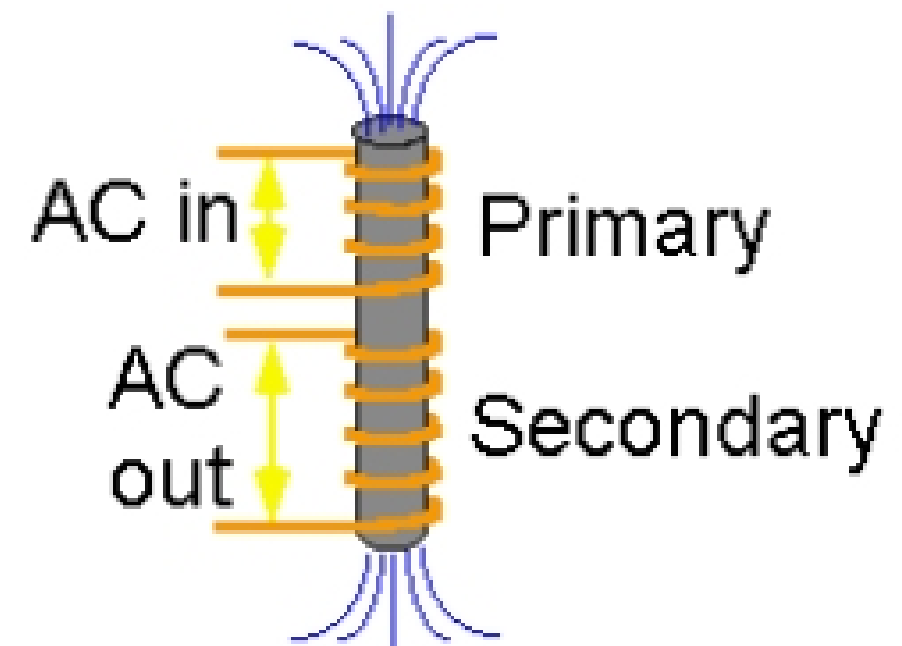
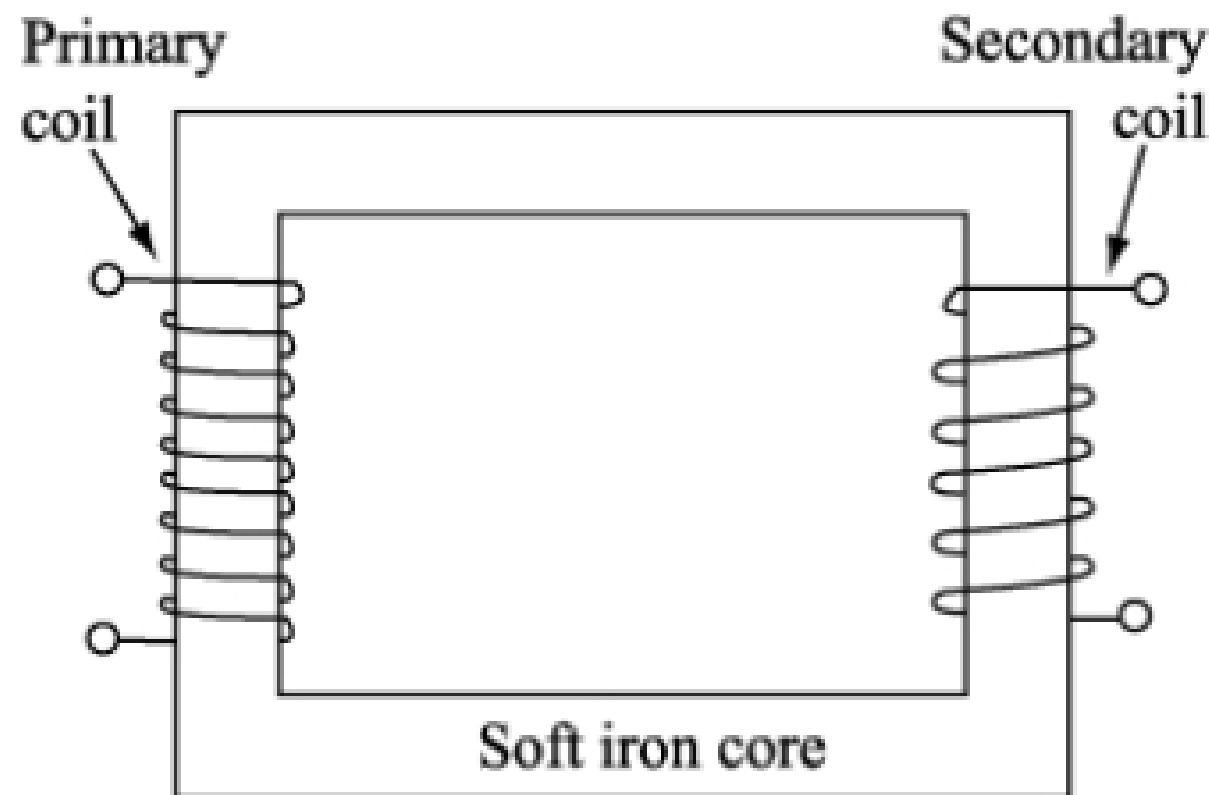


Faraday's Law

$$\text{EMF} = - \Delta \Phi_B / \Delta t$$

Transformer

- The output emf of a transformer may be greater or smaller than its input emf
- A transformer operates on ac



$$E_1 = N_1 \Delta\phi / \Delta t$$

$$E_2 = N_2 \Delta\phi / \Delta t$$

$$E_1 / E_2 = N_1 / N_2$$

$$E_1 I_1 = E_2 I_2 \text{ (power input = power output)}$$

$$\text{So } I_1 / I_2 = E_2 / E_1 = N_2 / N_1$$