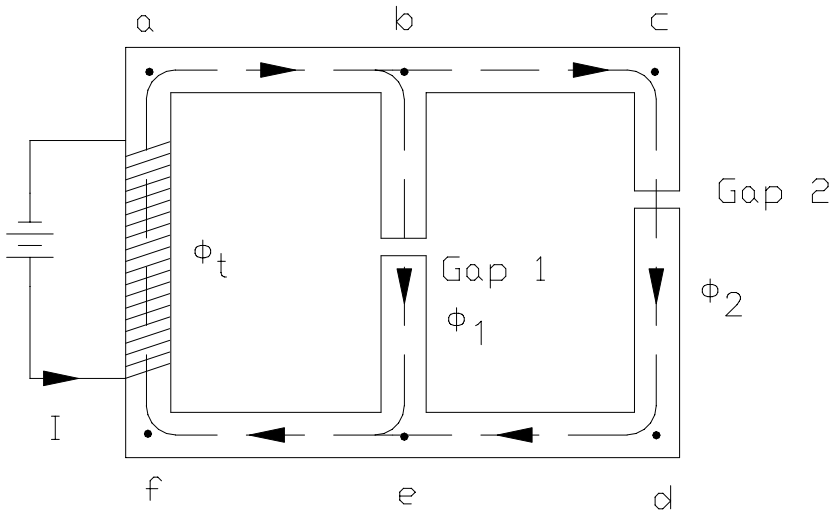
ET 332a
Magnetic Circuits Solution Using Circuits Concepts

Solve the magnetic circuit below using the electric circuits analogies. The total flux in the circuit, $\mathcal{F}_t$ is 0.012 Wb. The reluctances for the various parts of the magnetic circuit are listed below.



R_{gap1} = 99,500 A-t/Wb
R_{gap2} = 198,000 A-t/Wb
R_{be} = 4,630 A-t/Wb
R_{abef} = 6,400 A-t/Wb
R_{bcde} = 23,800 A-t/Wb

The coil has 1000 turns

1.) Draw the electrical analog schematic of the magnetic circuit shown and place the correct reluctance values on the diagram.

2.) Find the current, I, required in the coil to product the total flux.

3.) Find the flux in air gap 2.