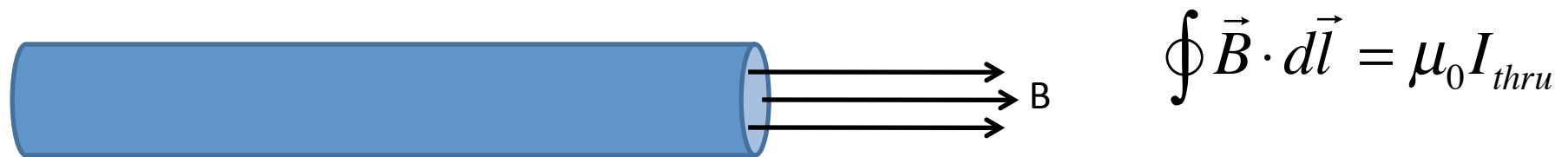


A current, I_1 , in Coil 1, creates a total magnetic flux, Φ_2 , threading Coil 2: $\Phi_2 = M_{21}I_1$

If instead, you put the same current around Coil 2, then the resulting flux threading Coil 1 is:

- A) Something that you need to calculate for the particular geometry.
- B) Is equal to the flux through Coil 2 only if the geometry is symmetrical.
- C) Is always equal to the flux that I_1 caused in Coil 2.
- D) Is nearly certain to differ from flux that was in Coil 2.

A long solenoid of cross sectional area, A , length, l , and number of turns, N , carrying current, I , creates a magnetic field, B , that is spatially uniform inside and zero outside the solenoid. It is given by:



A) $B = \mu_0 \frac{N^2}{l}$

C) $B = \mu_0 \frac{N}{l} I$

B) $B = \mu_0 \frac{N^2}{l} I$

D) $B = \mu_0 \frac{N}{l} AI$

A long solenoid of cross sectional area, A , length, l , and number of turns, N , carrying current, I , creates a magnetic field, B , that is spatially uniform inside and zero outside the solenoid. The self inductance is:



A) $L = \mu_0 \frac{N^2}{lA}$

C) $L = \mu_0 \frac{N^2}{l^2} A$

B) $L = \mu_0 \frac{N}{l} A$

D) $L = \mu_0 \frac{N^2}{l} A$