



Princess Sumaya University for Technology
Communication Engineering Department
Electromagnetics I
Quiz 4

Find the force $\mathbf{F}$ on a rectangular loop $a \times b$ carrying a current I_2 placed parallel to an infinitely long wire carrying a current I_1 at a distance ρ_0 from the near side?

Find $\mathbf{F}$ if $I_1 = 10\text{ A}$, $I_2 = 5\text{ A}$, $a = 10\text{ cm}$, $b = 30\text{ cm}$, and $\rho_0 = 20\text{ cm}$?