P #54

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$m = .200\ kg$

$I = 10.0\ A$

$l = .500\ m$

$\nu = .100$

Find F_B: $F_B = F_f = \nu \cdot m \cdot g$

$= (.100)(.200\ kg)(9.8\ m/s^2)$

$F_B = .196\ N$

Find B: $F_B = B \cdot I \cdot l$

$.196\ N = B \cdot (10.0\ A)(.500\ m)$

$B = .0392\ T$