

40. Since $N\Phi_B = Li$, we obtain

$$\Phi_B = \frac{Li}{N} = \frac{(8.0 \times 10^{-3} \text{ H})(5.0 \times 10^{-3} \text{ A})}{400} = 1.0 \times 10^{-7} \text{ Wb.}$$