

4. (a) The period is $T = 4(1.50\ \mu\text{s}) = 6.00\ \mu\text{s}$.
(b) The frequency is the reciprocal of the period:

$$f = \frac{1}{T} = \frac{1}{6.00\ \mu\text{s}} = 1.67 \times 10^5\ \text{Hz} .$$

- (c) The magnetic energy does not depend on the direction of the current (since $U_B \propto i^2$), so this will occur after one-half of a period, or $3.00\ \mu\text{s}$.