

Solutions

Each answer shows the steps, then the **result**.

2.1

- $L = \frac{|\varepsilon|}{|dI/dt|} = \frac{6.0}{3.0} = 2.0 \text{ H}$

2.2

- $U = \frac{1}{2}LI^2 = \frac{1}{2}(0.50)(4.0)^2 = 4.0 \text{ J}$

2.3

- the henry (H)

3.1 B

3.2 B

3.3

(a)

- $|\varepsilon| = L \frac{dI}{dt} = 0.20 \times 5.0 = 1.0 \text{ V}$

(b)

- $U = \frac{1}{2}(0.20)(3.0)^2 = 0.90 \text{ J}$