

## Solutions

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

### 2.1

- $\omega = \frac{1}{\sqrt{LC}} = \frac{1}{\sqrt{(2.0)(8.0 \times 10^{-6})}} = 250 \text{ rad s}^{-1}$

### 2.2

- the charge on the capacitor and the current in the inductor

### 2.3

- a mass on a spring (simple harmonic motion)

### 3.1 B

### 3.2 B

### 3.3

(a)

- $\omega = \frac{1}{\sqrt{LC}} = \frac{1}{\sqrt{(0.50)(20 \times 10^{-6})}} = \frac{1}{\sqrt{1.0 \times 10^{-5}}} = 316 \text{ rad s}^{-1}$

(b)

- a mass oscillating on a spring