

## Solutions

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

### 2.1

- $M = \frac{0.40}{2.0} = 0.20 \text{ M}$

### 2.2

- $\text{mol} = 1.2 \times 0.25 = 0.30 \text{ mol}$

### 2.3

- Solute: copper sulfate; solvent: water

### 3.1 B

- mol solute per litre of solution

### 3.2

(a)

- $250 \text{ mL} = 0.250 \text{ L}; M = \frac{0.50}{0.250} = 2.0 \text{ M}$

(b)

- $\text{mol} = 2.0 \times 0.050 = 0.10 \text{ mol}$

### 3.3

- $\text{mol} = 0.20 \times 0.500 = 0.10 \text{ mol}; \text{mass} = 0.10 \times 40.0 = 4.0 \text{ g}$