4. We know the specific heat of water is $c_w = 1$ cal / (gm $^\circ$C). We also know the mass of water and the temperature change, so the calculation is straightforward.

$$Q = c_w \ m \ \Delta T$$

$$Q = (1 \text{ cal / gm}^\circ\text{C}) \ (60 \text{ gm}) \ (85^\circ\text{C} - 25^\circ\text{C})$$

$$Q = (60) \ (60) \ \text{cal} = 3600 \text{ cal}$$