Checking Reaction Amount From a Heat Record

Scoring guide · one credit per question · review written work against each rubric

Checking Reaction Amount From a Heat Record

Question 1

Choice (2)

Both warm by 4.0 °C, but Q has twice the heat capacity.

Question 2

P gains 0.020 × 4.0 = 0.080 kJ, or 8.0 kJ/mol. Q gains 0.040 × 4.0 = 0.160 kJ, also 8.0 kJ/mol.

Question 3

The solution gains 0.040 × 3.0 = 0.120 kJ. Dividing by 8.0 kJ/mol gives 0.015 mol reacted.

Question 4

The solution’s gain would omit the escaped energy. Dividing that smaller gain by the energy per mole would give fewer moles than actually reacted.