Tracking Energy in Two Drying Pads

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

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Question 1

Choice (1)

The spread pad loses 0.50 g to evaporation, compared with 0.20 g from the folded pad.

Question 2

Evaporating 0.50 g requires 0.50 × 2.30 = 1.15 kJ.

Question 3

The spread pad needs 1.15 kJ and loses 0.60 kJ of its own thermal energy, so the surroundings supply 0.55 kJ. The folded pad needs 0.46 kJ and loses 0.20 kJ, so the surroundings supply 0.26 kJ.

Question 4

The same 0.20 g needs 0.46 kJ in all. With only 0.10 kJ supplied by the surroundings, the pad must supply 0.36 kJ, more than the earlier 0.20 kJ. The same total energy comes from a different mix of sources.