Heat of Fusion Worksheet

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

Heat of Fusion

Question 1

Choice (3)

q = (10.0 g)(334 J/g) = 3,340 J.

Question 2

The sample takes in heat from its surroundings to change from solid to liquid.

Question 3

m = q/Hf = 1,670 J ÷ (334 J/g) = 5.00 g.

Question 4

Choice (3)

The mcΔT expression describes energy transfer that changes temperature in one phase.

Melting Ice in a Model

Question 5

Choice (1)

P needs 6,680 J to melt all 20.0 g. It receives only 3,340 J, enough to melt half.

Question 6

m = 3,340 J ÷ (334 J/g) = 10.0 g. The other 10.0 g remains solid.

Question 7

Choice (2)

Q receives exactly (20.0 g)(334 J/g) = 6,680 J, its full melting requirement.

Question 8

R needs only (10.0 g)(334 J/g) = 3,340 J to melt. It receives 6,680 J, so additional energy can raise the liquid’s temperature after melting.