Reading Melt Fractions at One Temperature

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

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Question 1

Choice (1)

P needs 20 J/g and Q needs 40 J/g. With equal energy, more of P melts.

Question 2

P melts 120/20 = 6 g, or 6/10 of the sample. Q melts 120/40 = 3 g, or 3/10.

Question 3

Both remain at 30 °C while solid and liquid coexist. P is 60% melted and Q is 30% melted, so the equal temperatures do not establish equal fractions.

Question 4

Q needs to melt three more grams to reach 6 g melted. That takes 3 × 40 = 120 J more.