# Checking Heat With a Melting Ice Cup

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

### Checking Heat With a Melting Ice Cup

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### Question 1

Choice (2)

The cups start with the same phase conditions. More melting in Q requires more energy transfer.

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### Question 2

The difference in ice melted is 5.0 − 2.0 = 3.0 g. At 334 J/g this is 1002 J, or about $1.0 \times 10^3$ J.

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### Question 3

Melting 3.0 g uses 3.0 × 334 = 1002 J. Adding 668 J gained by the plate gives 1670 J, about $1.7 \times 10^3$ J.

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### Question 4

The original transfer is 5.0 × 334 = 1670 J. The repeat also accounts for 1670 J when the plate’s gain is added. Less melting in the repeat shows a smaller share went to the cup.