Exothermic and Endothermic Reactions Worksheet

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

Exothermic and Endothermic Reactions

Question 1

Choice (1)

An exothermic system releases heat to its surroundings.

Question 2

The reaction absorbs heat, so its q is positive. The bath loses heat and cools.

Question 3

Choice (2)

A negative q means energy leaves the defined system as heat.

Question 4

The reaction loses heat, so q = −240 J for the system. The bath gains it, so q = +240 J for the bath.

Reading Insulated Water Baths

Question 5

Choice (2)

Only Q cools the bath, indicating heat leaves the bath and enters the reacting system.

Question 6

$\Delta T = 26.0\ ^\circ C - 22.0\ ^\circ C = +4.0\ ^\circ C$.

Question 7

Choice (1)

P has the greatest positive temperature change. The baths have the same mass and specific heat.

Question 8

The bath is the surroundings and gained heat. The reacting system supplied that heat, so P is exothermic.