Temperature and Equilibrium Worksheet

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

Temperature and Equilibrium

Question 1

Choice (2)

The reverse reaction uses B and takes in heat to form A.

Question 2

Warming favors the heat-absorbing direction. In this model that is the reverse reaction, which forms A.

Question 3

Choice (2)

Cooling favors the exothermic direction, which produces B.

Question 4

They are equal again. The equilibrium amounts may change with temperature, and the two reactions continue at matching rates.

Comparing Equilibrium Compositions

Question 5

Choice (1)

B has 80 particles at 300 K, greater than 65 and 50 at the higher temperatures.

Question 6

50 − 80 = −30 particles.

Question 7

Choice (2)

At 350 K, B has 65 particles. At 400 K, only 50 remain.

Question 8

As temperature increases, B decreases from 80 to 50 and A increases from 20 to 50. This is consistent with the heat-absorbing reverse direction, which consumes B and makes A.