Checking Equilibrium With an Added Inert Gas

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

Checking Equilibrium With an Added Inert Gas

Question 1

Choice (1)

Each original contribution is 6/3 = 2 units. P keeps the same counts and volume. Q expands to volume four, so each reactive contribution falls to 6/4 = 1.5 units.

Question 2

Both chambers now contain 16 particle units. P gives 16/3, about 5.33 pressure units. Q gives 16/4 = 4.0 units.

Question 3

P stays at the original A-to-B composition because the reactive contributions are unchanged. Q expands and favors B, since one forward event changes one A particle into two B particles.

Question 4

P has the larger total pressure rise, from four to about 5.33. But its reactive pressures stay unchanged. Q keeps the original total pressure of four while its reactive contributions decrease, so Q changes composition.