Checking Rate Readings in Two Volumes

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

Checking Rate Readings in Two Volumes

Question 1

Choice (1)

P drops by 0.040 mol/L. Q drops by 0.020 mol/L.

Question 2

P consumes 0.040 × 0.100 = 0.0040 mol in 4.0 s. Q consumes 0.020 × 0.200 = 0.0040 mol in 4.0 s. Both average 0.0010 mol/s.

Question 3

P’s volume is half of Q’s. Its larger concentration drop applies to a smaller volume, giving the same mole change of 0.0040 mol.

Question 4

At the same volume and time, the follow-up’s concentration drop is twice as large. Its amount rate is 0.040 × 0.200/4.0 = 0.0020 mol/s, twice Q’s.