Reading a Reaction After Warm-Up

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

Reading a Reaction After Warm-Up

Question 1

Choice (3)

From 20 to 30 s, P rises from 9 to 14 units and Q rises from 3 to 8. Each forms five units.

Question 2

P forms 9 units in 20 s, or 0.45 unit/s. Q forms 3 units in 20 s, or 0.15 unit/s.

Question 3

From 30 to 40 s, P rises from 14 to 19 and Q rises from 8 to 13. Their rates in that interval are equal at 0.50 unit/s. Q still has less total product because it formed less during warm-up.

Question 4

Prewarm both sets of reactants to 35 °C and hold that temperature after mixing. Match the starting amounts, mixing, and detector settings. Start both clocks at mixing and compare the amount of product formed from 0 to 20 s. Similar early rates would support the warm-up explanation.