Checking a Model Bicarbonate Refill

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

Checking a Model Bicarbonate Refill

Question 1

The equation uses one hydrogen ion per bicarbonate ion. P has 0.020 mol bicarbonate and 0.030 mol H^+. Bicarbonate runs out first.

Question 2

Choice (2)

The reaction uses a 1:1 ratio. Q supplies exactly 0.030 mol bicarbonate for 0.030 mol H^+.

Question 3

One mole of H^+ is consumed for every mole of CO_2 collected. The remaining hydrogen ion amount is 0.030 − 0.020 = 0.010 mol.

Question 4

It would be too high. The trap undercounts the carbon dioxide actually produced. That undercounts the hydrogen ions consumed in the 1:1 reaction and overstates the amount left.