Tracking Salt Across a Model Tank

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

Tracking Salt Across a Model Tank

Question 1

Choice (3)

At six minutes both readings are 5.0 g/L.

Question 2

B rises by 4.0 − 2.0 = 2.0 g/L. Multiplying by 0.200 L gives a net gain of 0.40 g.

Question 3

The total starts at 0.200 × (8.0 + 2.0) = 2.0 g. At six minutes it is 0.200 × (5.0 + 5.0) = 2.0 g. A loses salt while B gains the same amount.

Question 4

The new total is 0.200 × (5.0 + 4.0) = 1.8 g. It is 0.2 g below the starting total. Movement inside the tank would conserve the total salt mass, so it cannot account for the new record alone.