# Tracking Salt Through Repeated Water Replacement

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

### Tracking Salt Through Repeated Water Replacement

---

### Question 1

Choice (3)

The starting concentration is 20/4.0 = 5.0 g/L, so the first liter contains 5.0 g.

---

### Question 2

There are 15 g in 4.0 L after the first refill, or 3.75 g/L. Removing the second liter leaves 15 − 3.75 = 11.25 g, before and after the final pure-water refill.

---

### Question 3

K removes two liters at the original 5.0 g/L, leaving 10 g. In J the second liter is taken after dilution and carries less salt.

---

### Question 4

It will be higher. The second drain removes only one quarter of the uniformly mixed salt, so some salt from the first refill remains and the second refill adds more.