Checking Counts When Decay Events Overlap

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

Checking Counts When Decay Events Overlap

Question 1

Choice (3)

Each trial has four actual events, even though P places two events in each of two windows.

Question 2

P displays 1 + 0 + 1 + 0 = 2. Q displays 1 + 1 + 1 + 1 = 4. Multiple events in a window still produce at most one display count.

Question 3

Both timelines contain four marks, one per actual decay. The display reports occupied windows, not total events. P occupies only windows 1 and 3 and displays two counts. Q occupies all four and displays four.

Question 4

The four events are now in four separate half-second windows, so all four are counted. The change separates events for the detector and does not change how many nuclei decay.