Comparing Equal Counts From Two Model Isotopes

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

Comparing Equal Counts From Two Model Isotopes

Question 1

Choice (1)

A fraction of one eighth must act on a larger starting population than one quarter to give the same count.

Question 2

P has 24 ÷ (1/8) = 192 starting parents. Q has 24 ÷ (1/4) = 96.

Question 3

P has 192 − 24 = 168 parents left and gives 168/8 = 21 events. Q has 96 − 24 = 72 parents left and gives 72/4 = 18 events.

Question 4

Each sample starts the second interval with fewer parents. The same loss of 24 was a larger fraction of Q’s population, so Q’s count drops more in the next equal interval.