Counting Products Along Two Decay Branches

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

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Question 1

Choice (3)

From 40 parents to 20 is 20 new decays. Three quarters of 20 is 15.

Question 2

There are 20 new decays. Five new daughters join the 10 alpha-branch daughters, for 15. Fifteen join the 30 beta-branch daughters, for 45.

Question 3

The reader would infer 20 + 45 = 65. The missing 15 are the alpha-branch daughters. Each of those also came from a different starting parent.

Question 4

Twenty parents remain, so 60 have decayed. With the fractions swapped, three quarters of 60 gives 45 alpha-branch daughters and one quarter gives 15 beta-branch daughters.