Fission and Fusion Worksheet

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

Fission and Fusion

Question 1

Choice (1)

Fission is the splitting of a nucleus.

Question 2

Two light nuclei combine to form a heavier nucleus, which is the pattern of fusion.

Question 3

Choice (2)

A neutron is one nucleon and has zero charge.

Question 4

Nucleons can be distributed among different nuclei and emitted particles. The total mass and charge numbers still add to the same values.

Sorting Nuclear Reaction Models

Question 5

Choice (2)

Q combines two light nuclei into the heavier (4, 2) nucleus and emits a neutron.

Question 6

Before: 235 + 1 = 236. After: 141 + 92 + 3(1) = 236. Both sides have the same total A.

Question 7

Choice (3)

The product Z values are 2 and 0, giving total Z = 2.

Question 8

The heavy nucleus with A = 235 absorbs a neutron in the model and splits into two smaller nuclei with A = 141 and A = 92. Extra neutrons are also produced.