Atomic Number and Mass Number Worksheet

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

Atomic Number and Mass Number

Question 1

Choice (2)

Atomic number equals proton count. Mass number equals 8 + 10 = 18.

Question 2

Phosphorus has atomic number 15. Its neutron count is 31 − 15 = 16.

Question 3

Choice (3)

Both nuclei have 7 protons, so both are nitrogen. They differ in neutron count.

Question 4

A single atom’s mass number counts protons plus neutrons, so it is an integer. The table gives the abundance-weighted average atomic mass of chlorine.

Water Tracers

Question 5

Choice (4)

S contains 8 protons and 10 neutrons, for a mass number of 18.

Question 6

S is oxygen because it has 8 protons. T is hydrogen because it has 1 proton. The periodic table lists those atomic numbers for oxygen and hydrogen.

Question 7

R and S each have 8 protons, so both are oxygen. R has 8 neutrons and S has 10, giving them different mass numbers.

Question 8

Choice (2)

A neutral atom has equal proton and electron counts. T has one proton.