Valence Electrons and Periodic Groups Worksheet

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

Valence Electrons and Periodic Groups

Question 1

Choice (3)

Mg and Ca are in Group 2.

Question 2

The total is 2 + 8 + 7 = 17. The third and highest occupied level contains 7 valence electrons.

Question 3

Both are Group 1 elements with one valence electron. The outermost electrons are the ones primarily involved in reactions.

Question 4

Choice (4)

The second energy level can hold eight electrons and is full in this arrangement.

Sorting Atom Cards

Question 5

Choice (2)

P and R each have one valence electron and represent Group 1 elements.

Question 6

Both have three occupied principal energy levels, so both are in Period 3.

Question 7

Choice (3)

After losing one electron, the atom has one more proton than electron.

Question 8

S has 2 + 6 = 8 electrons. Because it is neutral it has 8 protons, and the periodic table identifies atomic number 8 as oxygen.