Checking an Excited Atom Against the Table

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

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Question 1

Choice (1)

P and Q each have 12 protons and 12 electrons. Q has one electron in shell 4 instead of in shell 3.

Question 2

Q still has 12 electrons but one is in a higher shell. R has only 11 electrons for 12 protons, so it has lost one electron.

Question 3

Q still has 12 protons, so it remains magnesium. Its temporary excited arrangement does not change the row determined by the neutral ground state, which has three occupied shells.

Question 4

Sodium has 11 protons. R has 12 protons and the same 11 electrons, so it is a magnesium ion with charge +1.