

Periodic table – GCSE Chemistry

1. No.8

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This question is about elements in the periodic table.

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Argon has the atomic number 18

Explain why argon does **not** form compounds.

Answer in terms of electrons.

[2 marks]

Argon has a stable arrangement of electrons and so it does not share or transfer its electrons.

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Phosphorus (P) is the element below nitrogen in the periodic table.

Predict the formula of the compound formed between phosphorus and hydrogen.

[1 mark]Formula = PH₃

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Tellurium is the element with atomic number 52

Predict whether tellurium reacts with metals.

Explain your answer.

Answer in terms of the position of tellurium in the periodic table.

[2 marks]

It is located in group 6 of the periodic table, known as chalcogens. Elements in this group are non-metals. Non-metals react with metals to form ionic compounds. Tellurium, being a non-metal is expected to react with metals.

Barium (Ba) is an element in Group 2 of the periodic table.

Barium reacts with hydrochloric acid.

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Suggest **two** observations that could be made when barium reacts with hydrochloric acid.

[2 marks]

- 1 Formation of bubbles which indicate release of hydrogen gas during the reaction.
- 2 The reaction releases heat causing the solution to become warmer; because it is exothermic in nature.

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Write a balanced symbol equation for the reaction between barium and hydrochloric acid.

[3 marks]

