

**GCSE Chemistry A (Gateway Science)**

**J248/02 C4-C6 and C7 Foundation (Foundation Tier)**

**Question Set 13**

1 The Group 7 elements are called the halogens.

The table shows information about some of the halogens.

Name	Atomic number	Boiling point (°C)	State at room temperature	Molecular formula
Fluorine	9	-188	Gas	F <sub>2</sub>
Chlorine	17	-34	Gas	Cl <sub>2</sub>
Bromine	35	59	Liquid	Br <sub>2</sub>
Iodine	53	184	Solid	I <sub>2</sub>

(a) Which is the **most reactive** halogen in the table? [1]

(b) Astatine is also a halogen. It has the atomic symbol At and an atomic number of 85.

Look at the table.

(i) Predict the **state** of astatine at room temperature. [1]

(ii) Predict the **boiling point** of astatine. [1]

(c) Sodium, Na, reacts with chlorine. A white solid is made.

(i) What is the **name** of this white solid? [1]

(ii) Write down the **balanced symbol** equation for this reaction. [2]

**Total Marks for Question Set 13: 6**

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