

8 Groups and trends — Part 2 — Answers

Answers

Work through these after trying the questions yourself.

8.1 (a) pale yellow-green gas \ (b) grey-black solid.

8.2 Reactivity decreases down the group.

8.3 $\text{Cl}_2 + 2\text{KBr} \rightarrow 2\text{KCl} + \text{Br}_2$; the colourless solution turns orange.

8.4 Any two of: high density; high melting point; form coloured compounds; act as catalysts; have variable oxidation numbers.

8.5 They already have a full outer shell of electrons, so they do not need to gain, lose or share electrons.

8.6 No. Bromine is **less** reactive than chlorine (it is lower in Group VII), so it cannot displace the more reactive chlorine — no reaction occurs.