Solutions

Each answer shows the steps, then the **result**.

2.1

- the power of an atom to attract the electrons in a bond towards itself

2.2

- fluorine

3.1 B

- Rising nuclear charge with similar shielding pulls bonding electrons more strongly

3.2 B

- A large electronegativity difference gives an ionic bond

3.3

- down the group each element has more shells, so a larger atomic radius and more shielding; the nucleus attracts the bonding electrons less strongly, so electronegativity falls

3.4

- chlorine is more electronegative than hydrogen, so it pulls the bonding electrons closer, giving Cl a $\delta-$ and H a $\delta+$ — a polar bond