

## 3 Chemical bonding – Part 1 — Answers

---

### Answers

---

Work through these after trying the questions yourself.

**3.1** The power of an atom to attract the electrons in a (covalent) bond towards itself.

**3.2** Fluorine.

**3.3** (a) it rises across a period \ (b) it falls down a group.

**3.4** The electrostatic attraction between oppositely charged ions (positive cations and negative anions).

**3.5** The outer electrons are delocalised and free to move through the metal, so they can carry a current.

**3.6** A covalent bond in which both of the shared electrons come from the same atom.

**3.7** Sodium has a low electronegativity and chlorine a high one, so the large difference lets chlorine pull sodium's electron right across — electrons are transferred, giving ions (ionic). The two chlorine atoms in  $\text{Cl}_2$  are identical, so they pull equally and *share* the electrons — a covalent bond.