

Solutions

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

2.1

- live, neutral and earth

2.2

- water lets current pass into a person, increasing the risk of an electric shock

3.1 C

- the fuse (and switch) must be in the live wire

3.2

(a) the 10 A fuse

- it is just above the normal working current of 8 A, so it carries normal current but blows on a fault

(b) if the current gets too large, the thin fuse wire melts and breaks the circuit before the cable overheats

3.3

- if a live wire touches the metal case, the earth wire provides a low-resistance path to the ground
- a large current flows to earth
- this blows the fuse, cutting off the supply so the case cannot give a shock