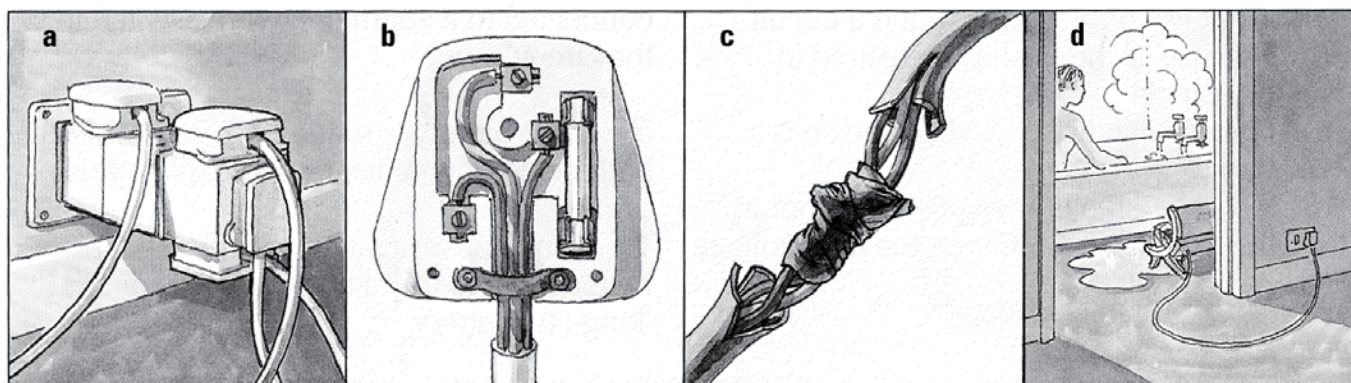


- In each of the following cases, explain why it is dangerous.
 - A mains cable is frayed, with damaged insulation.
 - Some water has been spilled on and near a mains socket.
 - A child is putting a metal object into a mains socket.
- Harry is using an electric drill. It is plugged into an extension lead which is wrapped round a drum. He has left most of the cable on the drum.
 - Why does a cable get warm when it is used?
 - Why might Harry's cable be dangerous, and what should he have done?
- Rose has connected a table lamp to a socket, by running the cable under a carpet. Explain 2 ways in which this might be dangerous.
- John is a keen gardener. He uses an electric lawnmower and a hedge-cutter, with a long cable back to a socket in the house.
 - Describe how this could be a dangerous situation.
 - Explain why he should always use an RCCB or ELCB circuit-breaker.
- Each of the pictures below shows an unsafe situation. For each one,
 - write a sentence about what is wrong, and
 - say what should be done to make it safe.



- If an accident happens, and someone is electrocuted, what must you do FIRST?
- The table shows some data for mains cables:

A normal mains circuit in a house uses 2.5 mm^2 cable.
A 9.2 kW electric shower needs 40 A.

- Explain why a separate circuit must be used for the shower.
- Explain which size of cable should be used for the shower circuit.

Cross-sectional area in mm^2	Maximum safe current in amps
1.0	11
2.5	20
4.0	26
6.0	34
10.0	46
16.0	61