Metallic bonding and the structure of iron

Learning objectives

1 Describe the bonding in iron.

2 Explain the properties of iron using ideas about bonding.

True or false?

These statements refer to the structure and properties of iron.

Read each statement carefully. Put a tick in one of the boxes to show whether you think it is true or false.

No.	Statement	True or false?	Group answer
1	Iron has a type of bonding called metallic bonding.		
2	The structure of iron is an example of a giant molecule.		
3	In the structure of iron there are positive ions.		
4	The atoms in iron are held together by ionic bonds.		
5	In the structure of iron, some electrons can move round the solid.		
6	If iron is heated to a very high temperature, it will become a gas.		
7	Iron can conduct electricity because iron atoms can slip over their neighbours and move through the solid.		
8	Iron conducts electricity because it contains a 'sea' of electrons.		
9	Iron expands when it is heated because iron atoms get bigger.		
10	Iron is a silvery grey metal because iron atoms are silvery grey.		