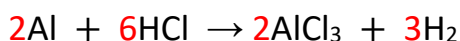
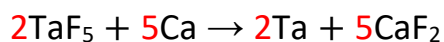


Name:

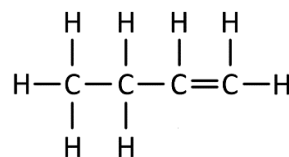
Class:



Balance the following equations.



Name the following compound.

**Butene**

Name the type of bond present in a molecule of hydrogen chloride, HCl.

Covalent (bonding)

State the formula of ethanoic acid.

An ion of element **X** can be represented asThis ion of element **X** has 54 electrons.

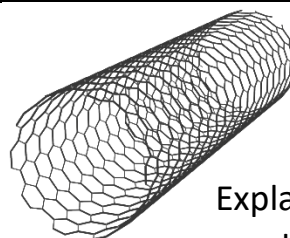
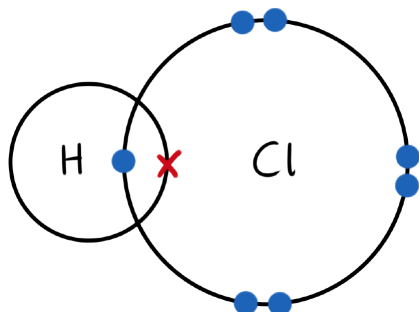
Calculate the number of protons and the number of neutrons in this ion.

Number of protons: **52**Number of neutrons: **73**

Describe a test to show the presence of carbonate ions in a sample.

Test: Add an acid (accept any acid) to the sample being tested.**Results:** If there is effervescence bubble it through limewater. If the limewater goes cloudy then carbonate ions were present.The element boron has isotopes. These isotopes have the same number of **protons** and a different number of **neutrons**.

Draw a dot and cross diagram to show the bonding in a hydrogen chloride molecule.

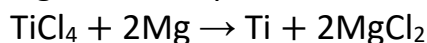


The figure shows a carbon nanotube.

Explain why carbon nanotubes conduct electricity.

Carbon nanotubes have delocalised electrons which can move and carry charge.

Titanium chloride reacts with magnesium to produce titanium and magnesium chloride.



Calculate the number of moles in 45 000 grams of titanium chloride.

Moles = mass ÷ Mr**Moles = 45 000 ÷ 190****Moles = 236.8**