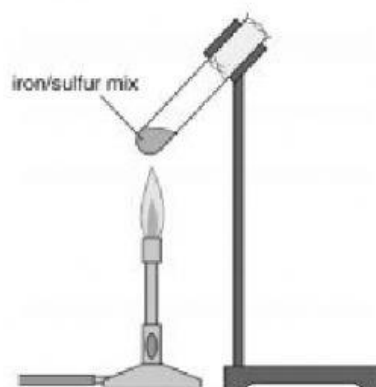When iron and sulfur are mixed and heated, as shown opposite, they form iron sulfide.

1 Choose *one* of the words below to complete this sentence.

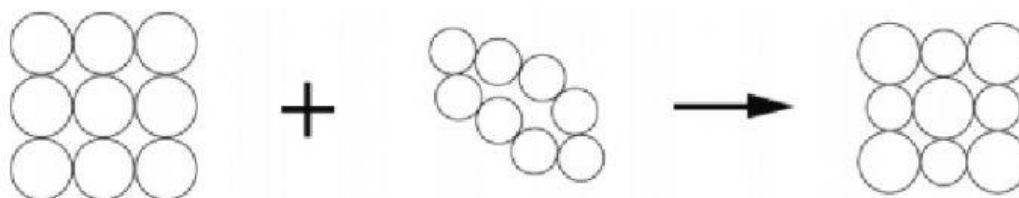When the reaction starts you see the mixture ...

| smoking | glowing | evaporating | freezing |

iron/sulfur mix

2 The diagrams below represent the atoms in this reaction.

Complete the labels on the diagrams and colour in the diagrams, making the sulfur atoms yellow and the iron atoms grey.

iron + _____ → _____

3 Complete the table showing the names of elements in a compound.

Element 1	Element 2	Name of compound
magnesium	sulfur	
	chlorine	sodium chloride
		lead oxide

4 Complete the following sentences.

When two elements are mixed together they often don't _____ until they are heated.

Sometimes when a reaction occurs a red glow is seen, showing that _____ is given out.

It is easy to separate the elements from one another in a _____ but very difficult to separate the _____ from one another in a compound.

The compound has different _____ to the elements it is formed from.

To name the compound formed between a metal and a non-metal, the metal name is written first and then the non-metal name with the ending changed to _____ .

5 Compounds are sometimes represented by the symbols of the elements joined together. Name the compounds shown below
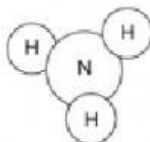
a NaCl _____   b MgO _____
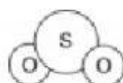
c ZnS _____   d AgBr _____

6 By counting up the atoms, write the chemical formula beside each of the molecules.
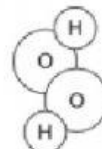
a

_____
ammonia

b

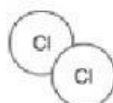_____
sulfur dioxide
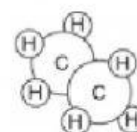
c

_____
hydrogen peroxide

d

_____
carbon monoxide
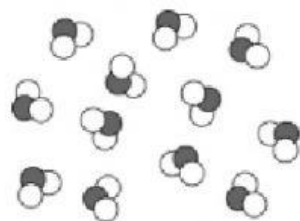
e

_____
chlorine

f

_____
ethane

7 A natural substance can be a pure element, a pure compound, a mixture of elements, a mixture of compounds or a mixture of elements and compounds.
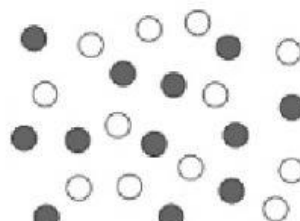
Tick the correct boxes to classify each substance shown in the particle drawings below.
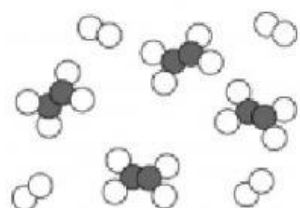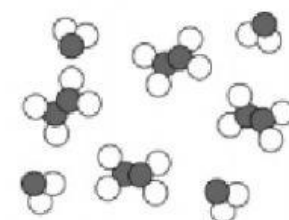
a

☐ pure
☐ mixture
☐ element
☐ compound

2

☐ pure
☐ mixture
☐ element
☐ compound

b

☐ pure
☐ mixture
☐ element
☐ compound

4

☐ pure
☐ mixture
☐ element
☐ compound