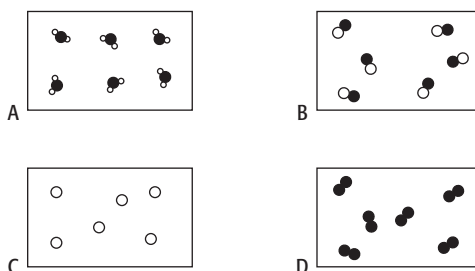


# Worksheet 3.9

## Noble and inert!

The boxes below represent the particles of different gases. One box shows the particles of elements in Group VIII / 0.



1 a What name is given to Group VIII / 0 (8) elements? .....

b Name two elements from Group VIII / 0. ....

2 a Which box best represents particles from Group 0 elements? .....

b Explain the reason for your answer.

.....  
.....

3 A lighted splint is put into a gas jar of helium. What would happen?

.....

4 Some properties of elements change as you go down their group in the periodic table. Research the library or the internet and, for each property listed below, comment on whether it changes as you go down Group VIII / 0 and, if so, how it changes.

a Reactivity:

.....  
.....

**b** Density:

.....  
.....

**c** Metal or non-metal:

.....  
.....

**5** Which would be the best method to distinguish between different samples of Group VIII / 0 gases? Choose from the list below:

- i** Shake the sample with water and add an indicator.
- ii** Carry out a flame test.
- iii** Put a lighted splint into a sample of each gas.
- iv** Measure the density of each.