

ATOMIC RADIUS

1. When goes down to group 17, atomic radius _____. This is due to, when going down to group 17, _____increases, as the proton increase. As proton number increase, number of _____also increased, which caused more shells are required to fill in _____and gradually increase the _____. As a result, the effective nuclear charge_____and caused the atomic radius to increase down Group 17.

MELTING POINT AND BOILING POINT

2. When goes down to group 17, atomic melting and boiling point increased from Cl₂, Br₂, I₂ .This is due to, when going down to group 17, _____increases and caused the_____increase . As a result, the melting and boiling point increase down the group 17 and each element group 17 exist as different physical form.

COLOUR INTENSITY

3 When goes down to group 17, as the weak Van Der waal's forces increased from Cl_2 , Br_2 , I_2 , molecules become more _____ causing the number of molecules per unit volume

_____. Hence, it increased the colour _____ of halogen. This will cause the colour of halogens to become _____.

VOLATILITY

4 When goes down group 17, the volatility (the easiness of molecules to vapourised under atm) _____ due to stronger _____ between particles hence harder to vapourise.

Electronegativity, bonding energy

5. Electronegativities measure the ability to pull the bonding pair towards the direction of the atom. When goes down group 17, the electronegativity of the group 17 _____

due to the _____ of _____ of the elements, hence _____ the _____. _____ has the highest electronegativity among all group 17 elements and this allowed fluorine to _____ strongly to electron hence more stable.

6. Bonding energy measure the heat required to break the bond form between 2 atoms.

Why the bonding energy decreased when going down the group 17?

7. Fluorine , however has a lower bonding energy compare to chlorine. Why?
