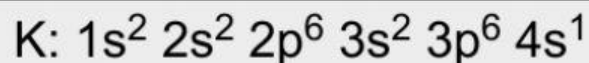


# PERIODICITY: SIZES

ANSWER ALL QUESTIONS.



Which group does they belong to?

same group

isoelectronic

same period

Which atom is larger?

Na

K



Which group does they belong to?

same group

isoelectronic

same period

Which atom is larger?

Na

Mg



Which group does they belong to?

same group

isoelectronic

same period

Which atom is larger?

$\text{Na}^+$

$\text{F}^-$



Which group does they belong to?

same group

isoelectronic

same period

Which atom is larger?

$\text{F}^-$

$\text{Cl}^-$

# PERIODICITY: SIZES

ANSWER ALL QUESTIONS.

O:  $1s^2 2s^2 2p^4$

What happen when two electron are added to O atom?

electron – electron repulsion  
decrease

electron – electron repulsion  
increase

Size of O atom is smaller than  
size of  $O^{2-}$  ion.

Size of O atom is larger than  
size of  $O^{2-}$  ion.

K:  $1s^2 2s^2 2p^6 3s^1$

What happen when an electron is removed from K atom?

electron – electron repulsion  
decrease

electron – electron repulsion  
increase

Size of K atom is smaller than  
size of  $K^+$  ion.

Size of K atom is larger than  
size of  $K^+$  ion.

Mg:  $1s^2 2s^2 2p^6 3s^1$

S:  $1s^2 2s^2 2p^6 3s^2 3p^4$

Both atom are in period 3. Compare the size of  $S^{2-}$  to  $Mg^{2+}$

$Mg^{2+}$ :  $1s^2 2s^2 2p^6$

$S^{2-}$ :  $1s^2 2s^2 2p^6$

$Mg^{2+}$ :  $1s^2 2s^2 2p^6 3s^2 3p^6$

$S^{2-}$ :  $1s^2 2s^2 2p^6 3s^2 3p^6$

$Mg^{2+}$  has more shell than  
 $S^{2-}$

$S^{2-}$  has more shell than  
 $Mg^{2+}$

$Mg^{2+}$  has more shielding  
effect than  $S^{2-}$

$S^{2-}$  has more shielding  
effect than  $Mg^{2+}$

Nucleus attraction towards  
valence electrons in  $Mg^{2+}$  is  
stronger than  $S^{2-}$

Nucleus attraction towards  
valence electrons in  $S^{2-}$  is  
stronger than  $Mg^{2+}$

$Mg^{2+}$  is smaller than  $S^{2-}$

$Mg^{2+}$  is larger than  $S^{2-}$