PERIODICITY: SIZES

ANSWER ALL QUESTIONS.

Na: $1s^2\ 2s^2\ 2p^6\ 3s^1$ K: $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^1$

Which group does they belong to?

same group | isoelectronic | same period

Which atom is larger?

Na | K

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

Which group does they belong to?

same group | isoelectronic | same period

Which atom is larger?

Na | Mg

Na^+ : $1s^2\ 2s^2\ 2p^6$ F^- : $1s^2\ 2s^2\ 2p^6$

Which group does they belong to?

same group | isoelectronic | same period

Which atom is larger?

Na^+ | F^-

F^- : $1s^2\ 2s^2\ 2p^6$ Cl^- : $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6$

Which group does they belong to?

same group | isoelectronic | same period

Which atom is larger?

F^- | 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-}