

Which group on the periodic table is most likely described by the following?

- 1) The elements in this group have a charge of +2 when forming ionic compounds.
- 2) The elements in this group are almost completely nonreactive.
- 3) The elements in this group are all diatomic.
- 4) The elements in this group are called alkali metals.
- 5) These elements are found in group VII of the periodic table.

What is the oxidation state (charge) of each element when it forms ionic compounds:

- | | |
|-------------------|---------------------|
| 6) chlorine _____ | 8) potassium _____ |
| 7) barium _____ | 9) phosphorus _____ |

Determine the number of valence electrons each of the following elements has:

- | | |
|---------------------|--------------------|
| 10) hydrogen _____ | 13) calcium _____ |
| 11) bromine _____ | 14) carbon _____ |
| 12) magnesium _____ | 15) fluorine _____ |

Solutions

Which group on the periodic table is most likely described by the following?

- 1) The elements in this group have a charge of +2 when forming ionic compounds.

group II

- 2) The elements in this group are almost completely nonreactive.

noble gases (group VIII)

- 3) The elements in this group are all diatomic.

halogens (group VII)

- 4) The elements in this group are called alkali metals.

group I

- 5) These elements are found in group II of the periodic table.

Alkaline earth metals

What is the oxidation state (charge) of each element when it forms ionic compounds:

- | | |
|-----------------------|-------------------------|
| 6) chlorine 1- | 8) potassium 1+ |
| 7) barium 2+ | 9) phosphorus 3- |

Determine the number of valence electrons each of the following elements has:

- | | |
|------------------------|-----------------------|
| 10) hydrogen 1 | 13) calcium 2 |
| 11) bromine 7 | 14) carbon 4 |
| 12) magnesium 2 | 15) fluorine 7 |