

# Determining Shells and Valence Electrons Notes

## Valence Electrons

Each electron \_\_\_\_\_ can hold a certain number of electrons

Electron shells are filled from the \_\_\_\_\_.

Noble Gases have \_\_\_\_\_ outer electron shells

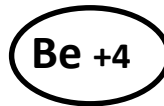
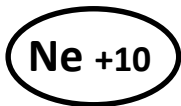
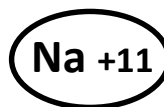
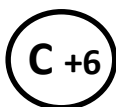
All other elements have \_\_\_\_\_ outer electron shells

Shell 1	Shell 2	Shell 3	Shell 4	Shell 5	Shell 6	Shell 7

Elements have the same number of \_\_\_\_\_ as their period.

Elements have the same number of \_\_\_\_\_ as their group.

Transition Metals are special cases that you will learn about in high school.



Shells:

Valence electrons:

Shells:

Valence electrons:

S +16

K +19

Shells:

Valence electrons:

Shells:

Valence electrons:

**Valence Shells & Reactivity**

Atoms want to gain \_\_\_\_\_.

Atoms will try to \_\_\_\_\_ electrons to have a \_\_\_\_\_ valence shell

Noble gases are usually \_\_\_\_\_ because they have full valence shells

Metals try to \_\_\_\_\_ electrons. \_\_\_\_\_ and \_\_\_\_\_ metals are the most reactive.

Non-Metals try to \_\_\_\_\_ electrons, with \_\_\_\_\_ being the most reactive.

**Gaining & Losing Electrons**

Electrons are \_\_\_\_\_ charged; Protons are \_\_\_\_\_ charged.

Neutral atoms do not have a charge because the \_\_\_\_\_.

When atoms gain or lose electrons they become positively or negatively \_\_\_\_\_.

An atom with a charge is called an \_\_\_\_\_.