

Practice: $[Ne] 3s^1 = Na$

Write the electron configuration for sodium and neon:

Ne: $1s^2 2s^2 2p^6$

Na: $1s^2 2s^2 2p^6 3s^1$ - valence e^-

core e^-

valence $e^- = e^-$ in the outermost shell/E.L.
 core e^- (inner) = e^- inside the valence e^-

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Noble Gas Notation (Configuration):

--Noble gases are located in group 18 or group VIII A on the periodic table.

--The symbol of the element in brackets [] can be used to represent the nucleus and the inner (core) electrons

Example: Sodium $1s^2 2s^2 2p^6 3s^1$
 Neon $1s^2 2s^2 2p^6$

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Noble Gas Configuration

-short hand way of writing electron configurations

Steps for writing Noble Gas Configurations:

1. Find the element on the periodic table
2. Go up one period and over to the noble gas
3. Write the noble gas symbol in brackets []
4. Continue writing the electron configuration starting with the element following the noble gas

Example: Iron

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Electron Configurations in the Periodic Table

$[Xe] 6s^1$

$[Ar] 4s^2 3d^{10} 4p^2$

$[Xe] 6s^2 4f^{14} 5d^{10} 6p^6$

$[Ar] 4s^2 3d^9$

$p456$

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Noble Gas Notation Practice

Write the noble gas notations for the following elements:

Germanium (Ge)

Astatine (At)

Cesium (Cs)

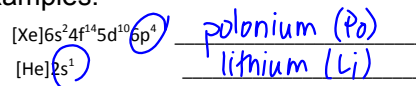
Copper (Cu)

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Noble Gas Notation Practice

Elements can be identified based on their noble gas notation

Examples:



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