

# RADII TRENDS - GENERAL CHEMISTRY FORMATIVE ASSESSMENT - KEY



## STUDENT CHECK FOR UNDERSTANDING

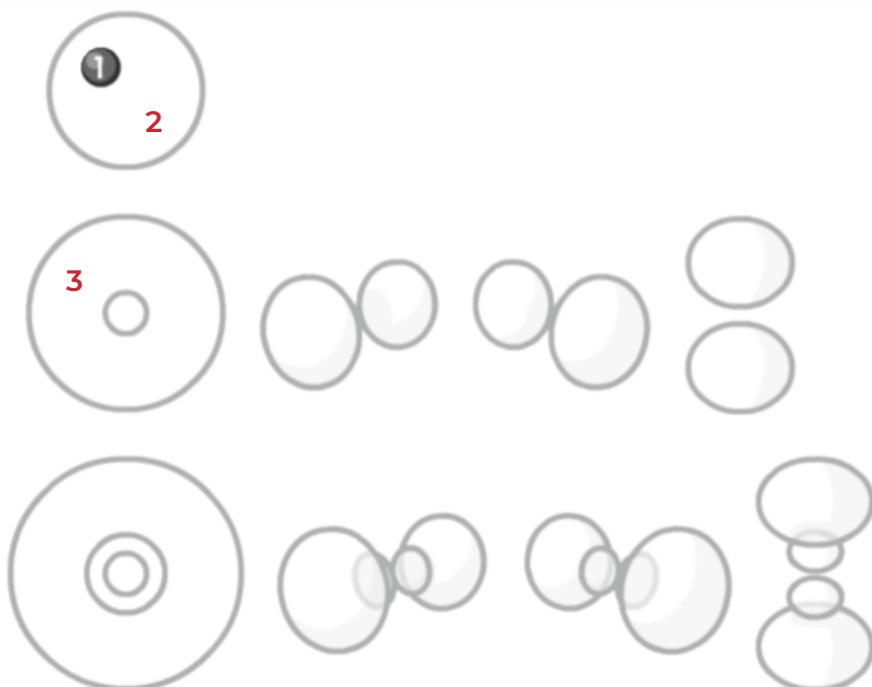
Concepts:  
Electron  
Configuration &  
Atomic Orbitals

### TASK

Create three atoms in order of decreasing atomic radius in the space below. You have a **total of 20 protons** all of which you must use. As you fill each orbital, number each electron in the order that it is added. The first electron has already been added for you. Once you finish, write out the electron configuration, determine the number of valence electrons, and identify the number of energy levels in the space provided.

Multiple Correct Answers - Example Shown Below

LARGEST ATOMIC RADIUS



Proton Number 3

Element Name & Symbol

Lithium

Electron Configuration

1s<sup>2</sup>2s<sup>1</sup>

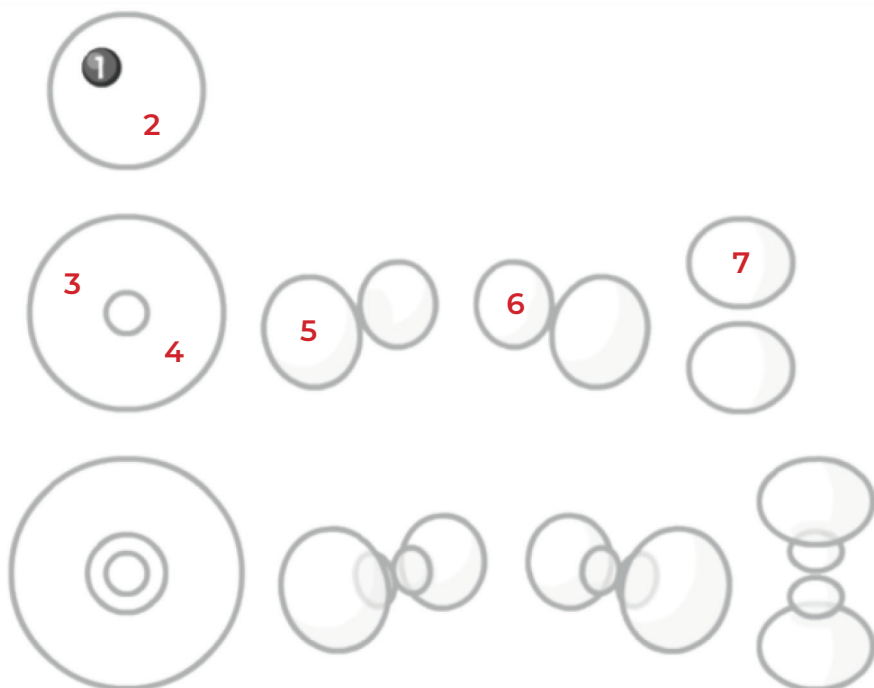
Valence Electrons 1

Energy Levels 2

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### INTERMEDIATE ATOMIC RADIUS



Proton Number 7

Element Name & Symbol

**Nitrogen**

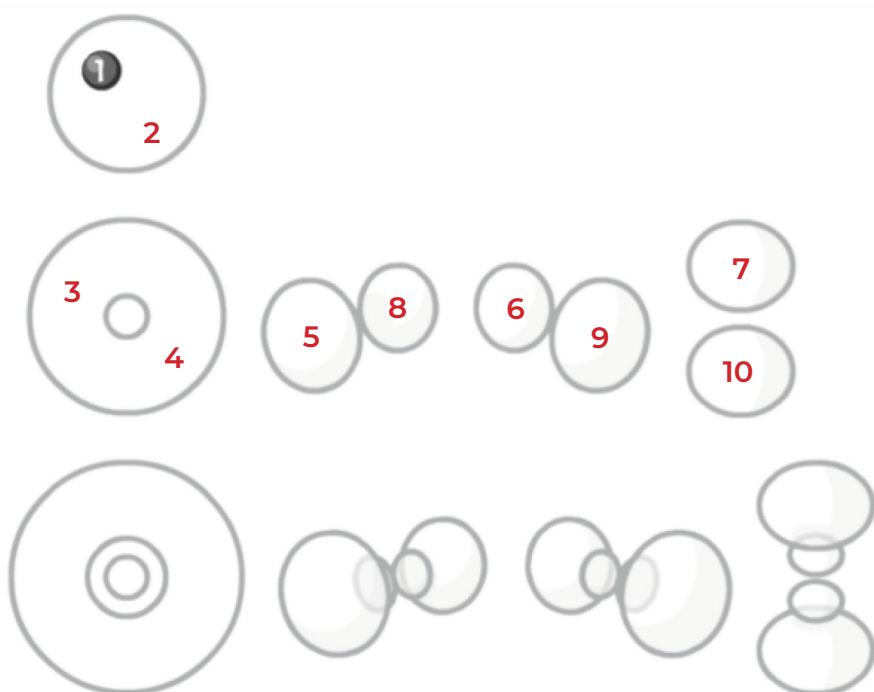
Electron Configuration

**$1s^2 2s^2 2p^3$**

Valence Electrons 5

Energy Levels 2

### SMALLEST ATOMIC RADIUS



Proton Number 10

Element Name & Symbol

**Neon**

Electron Configuration

**$1s^2 2s^2 2p^6$**

Valence Electrons 8

Energy Levels 2