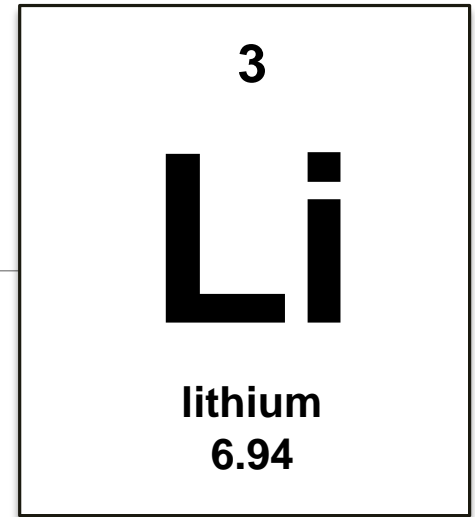


Drawing Bohr-Rutherford Diagrams

SECTION 5.2

Representing Atoms

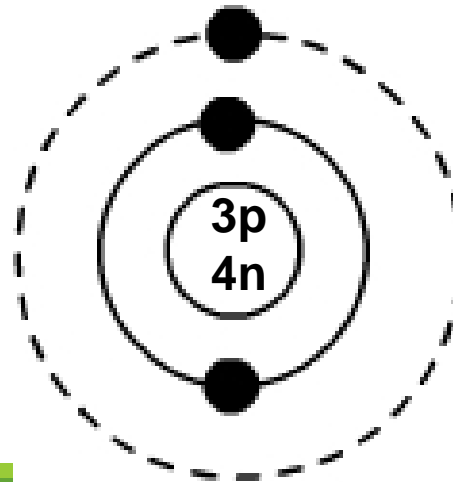


Standard Atomic
Notation



#p = 3
#e = 3
#n = 4

Bohr-Rutherford
diagram



Bohr-Rutherford Model

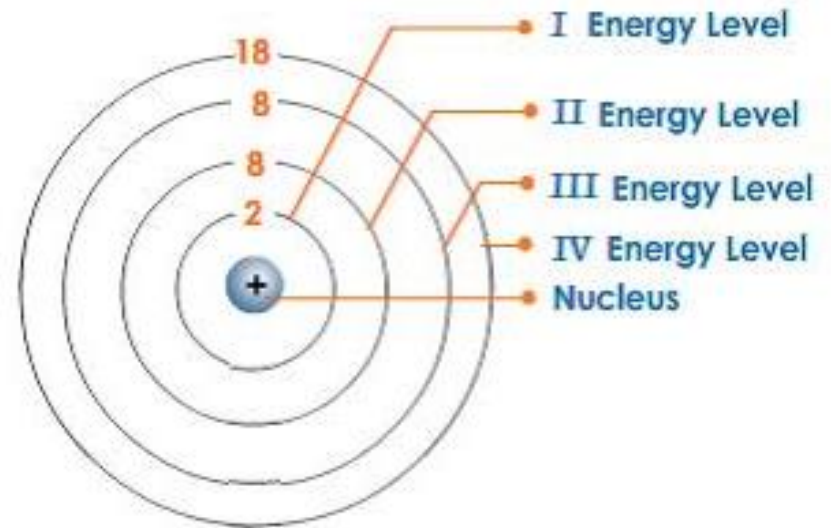
In nucleus:

protons, neutrons

In energy levels (“shells”) outside nucleus:

electrons

- shell capacity: 2, 8, 8, 18



Drawing a Bohr-Rutherford diagram

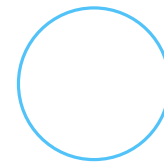
1. Draw a circle: the **nucleus**.
Write the # of protons and neutrons.
2. Determine the # of electrons.
3. Draw a circle around the nucleus: first **energy level**. Start adding electrons.
4. When the energy level is full, add another, and place the electrons.
5. Continue until all electrons have been placed.

example: Boron

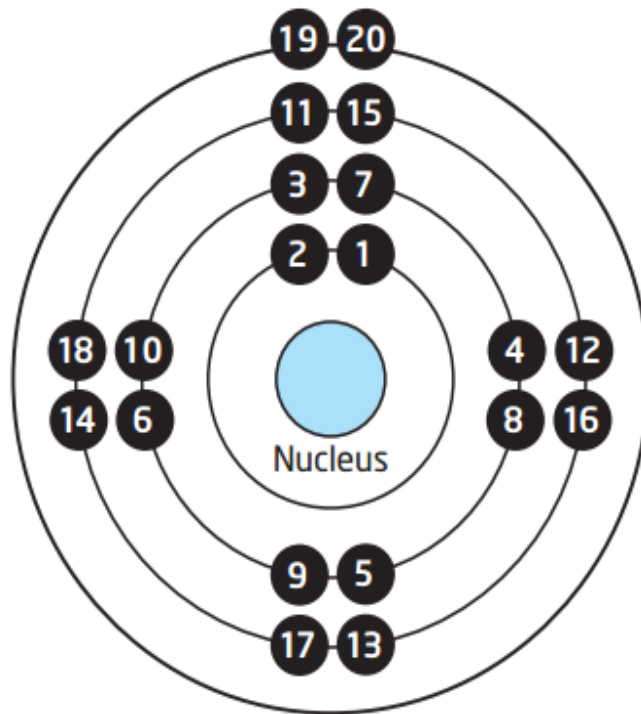
11

B

5



When placing electrons, remember the rule:
single before they mingle!



The numbers indicate the sequence to follow when adding the first 20 electrons to Bohr-Rutherford models.

Try it yourself - freehand!

How would you draw a Bohr-Rutherford diagram for **sodium**?

Homework

1. Finish the rest of the handout (electron filling for first 20 elements)
2. Complete the worksheet: standard atomic notation and B-R diagrams for first 20 elements

