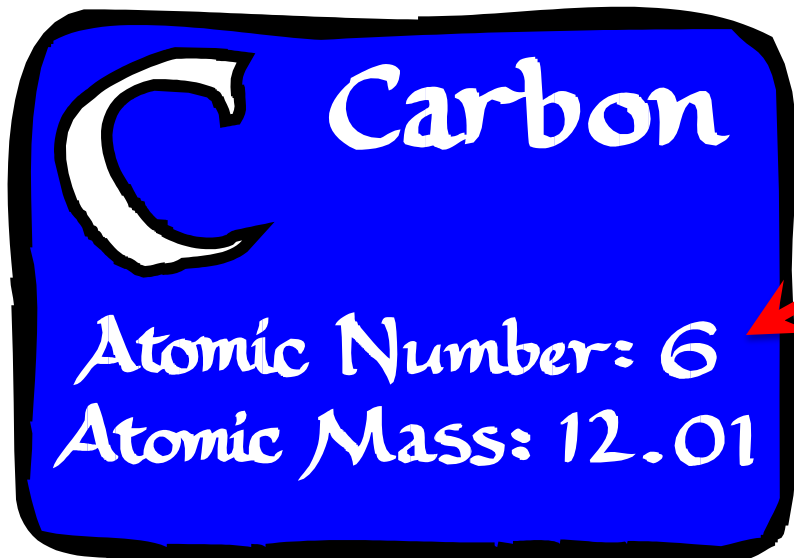


Atomic Modeling

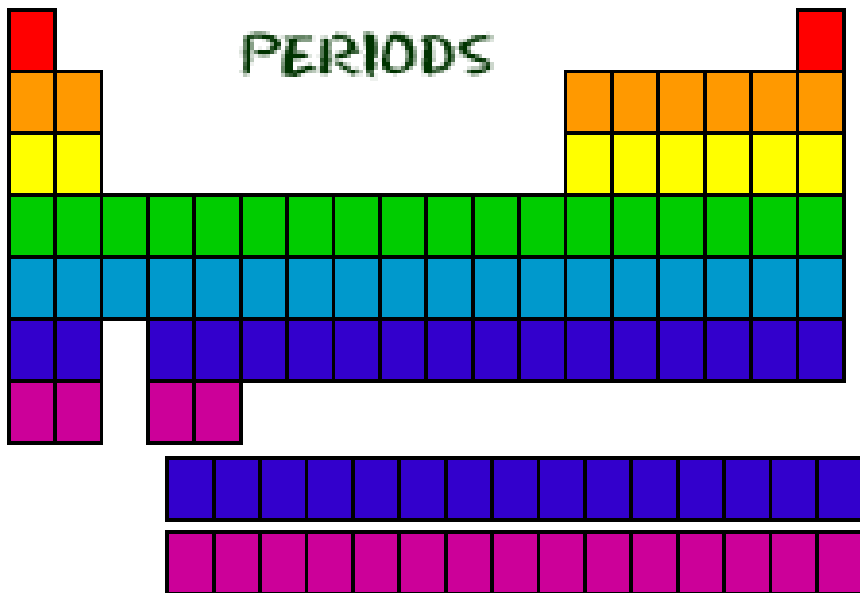
Bohr Models & Electron Dot Diagrams

Bohr Diagrams

- 1) Find your element on the periodic table.
- 2) Determine the number of electrons – it is the same as the atomic number.
- 3) This is how many electrons you will draw.

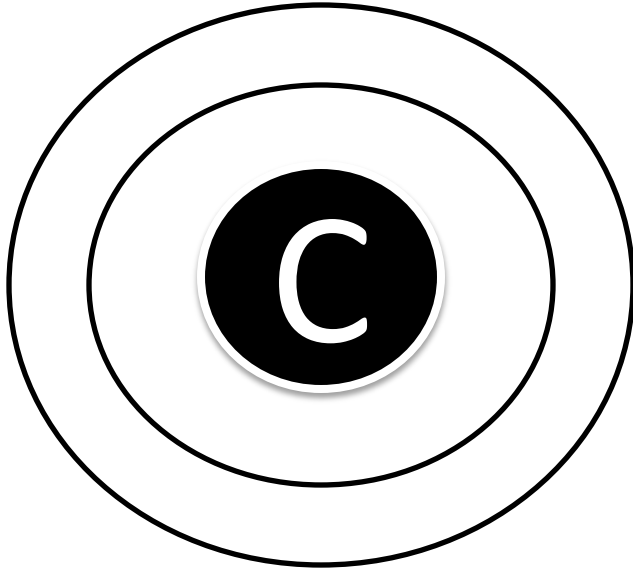


Bohr Diagrams



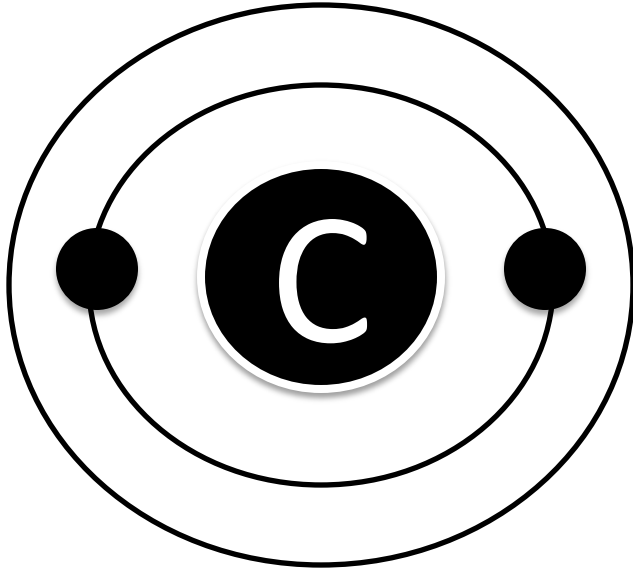
- Find out which period (row) your element is in.
- Elements in the **1st period** have one energy level.
- Elements in the **2nd period** have two energy levels, and so on.

Bohr Diagrams



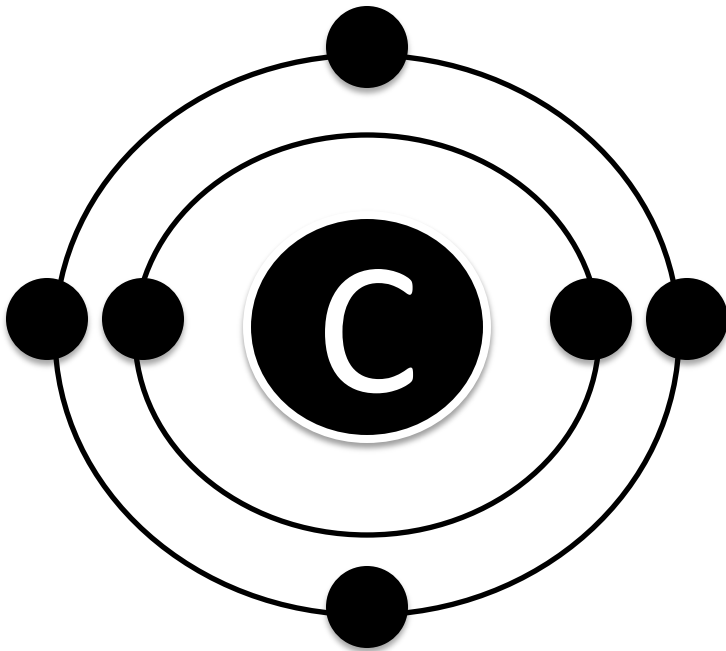
- 1) Draw a nucleus with the element symbol inside.
- 2) Carbon is in the 2nd period, so it has two energy levels, or shells.
- 3) Draw the shells around the nucleus.

Bohr Diagrams



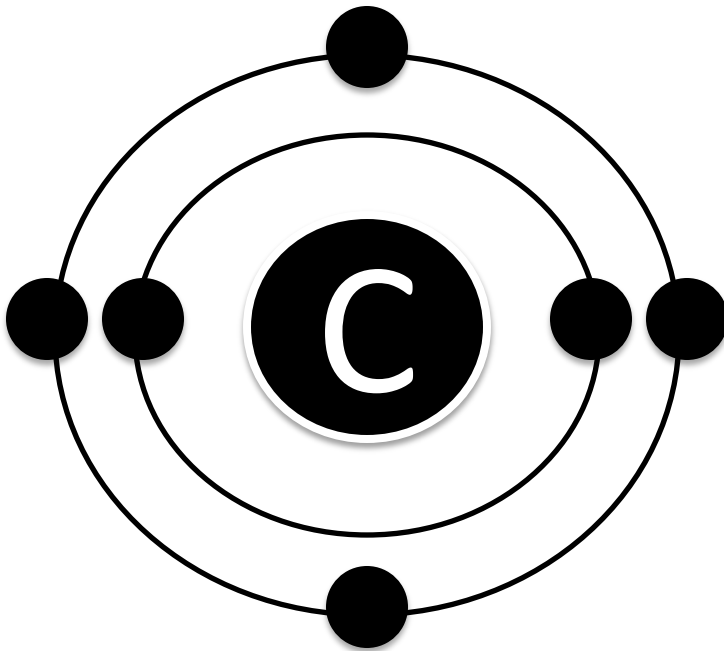
- 1) Add the electrons.
- 2) Carbon has 6 electrons.
- 3) The first shell can only hold 2 electrons.

Bohr Diagrams



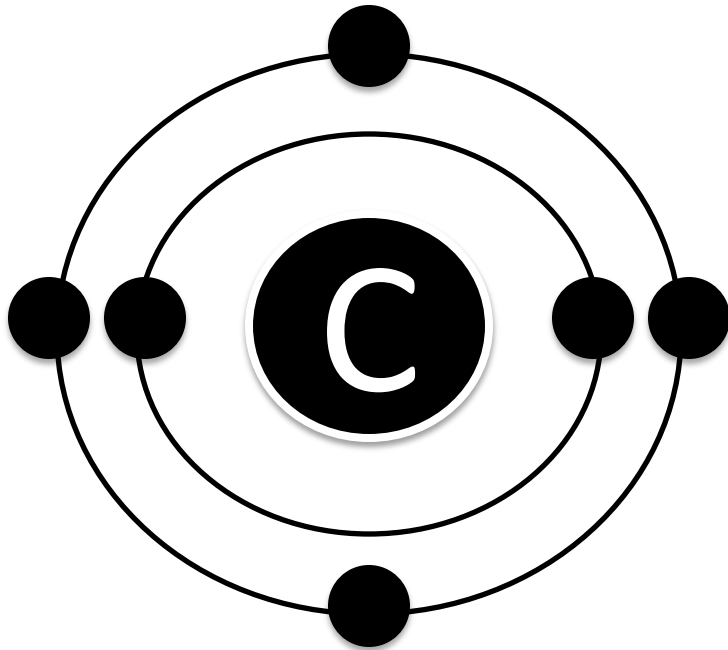
- 1) Since you have 2 electrons already drawn, you need to add 4 more.
- 2) These go in the 2nd shell.
- 3) Add one at a time - starting on the right side and going counter clock-wise.

Bohr Diagrams



- 1) Check your work.
- 2) You should have 6 total electrons for Carbon.
- 3) Only two electrons can fit in the 1st shell.
- 4) The 2nd shell can hold up to 8 electrons.
- 5) The 3rd shell can hold 8, but the elements in the first few periods only use 8 electrons.

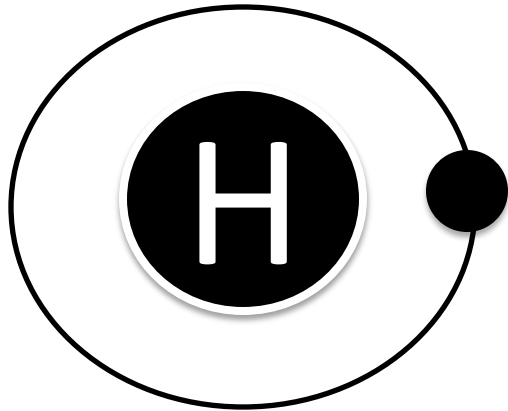
Bohr Diagrams



Try the following elements
on your own:

- a) H
- b) He
- c) O
- d) Al
- e) Ne
- f) K

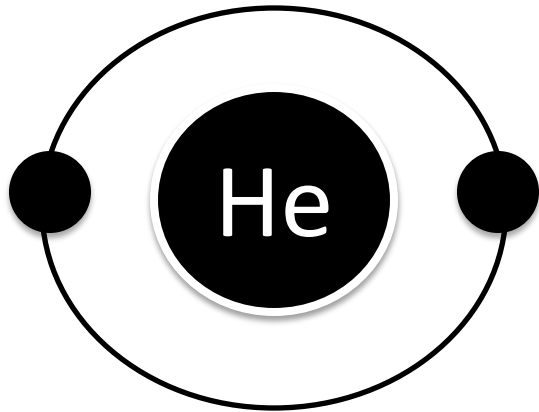
Bohr Diagrams



Try the following elements on your own:

- a) H – **1 electron**
- b) He
- c) O
- d) Al
- e) Ne
- f) K

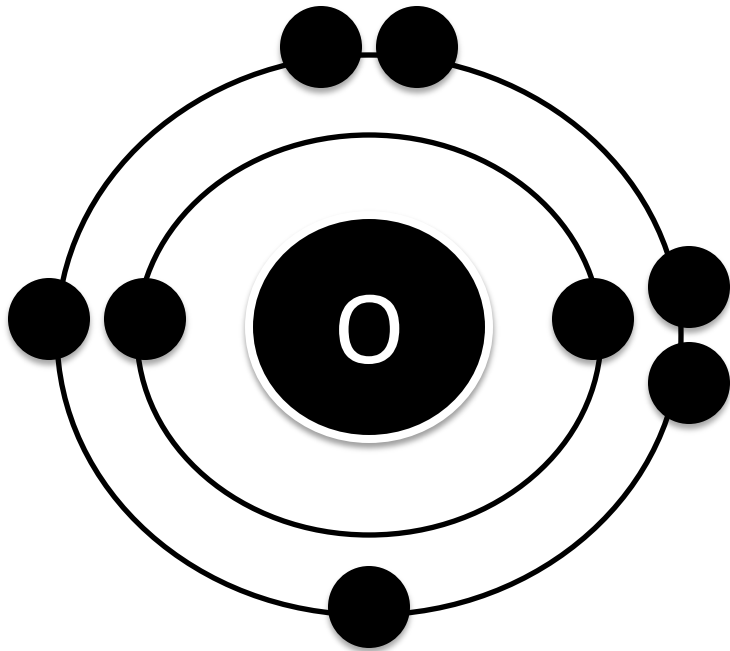
Bohr Diagrams



Try the following elements
on your own:

- a) H
- b) He - **2 electrons**
- c) O
- d) Al
- e) Ne
- f) K

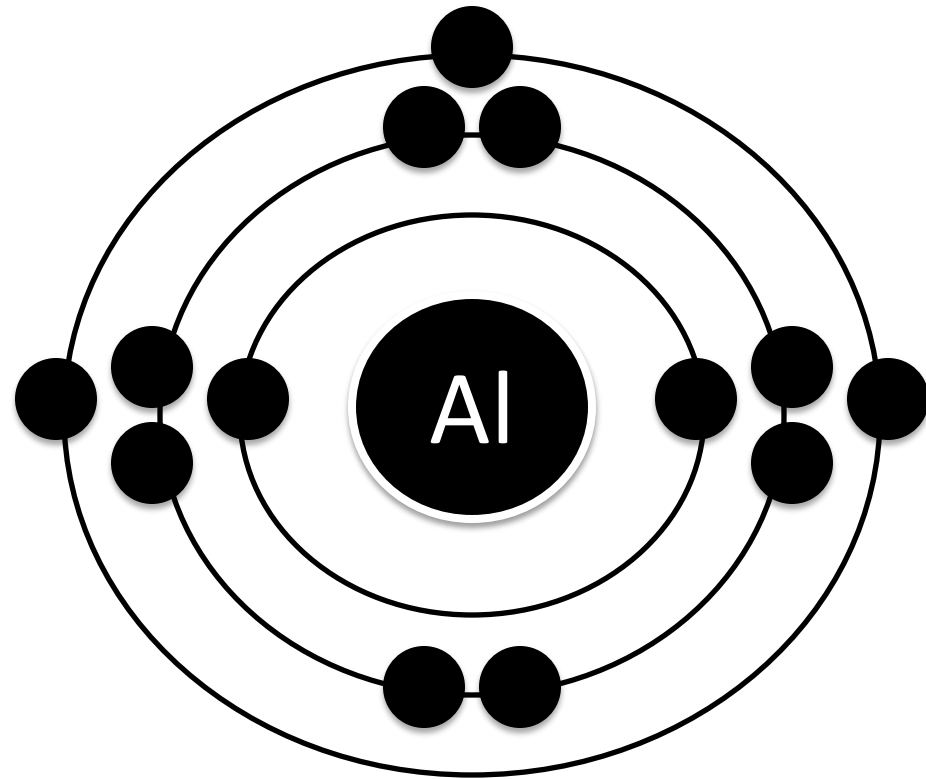
Bohr Diagrams



Try the following elements on your own:

- a) H
- b) He
- c) O - **8 electrons**
- d) Al
- e) Ne
- f) K

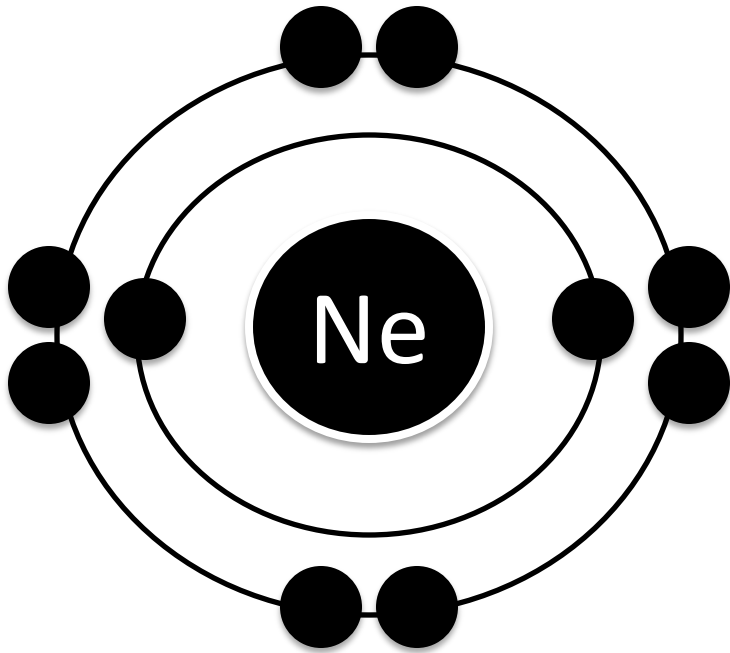
Bohr Diagrams



Try the following elements on your own:

- a) H
- b) He
- c) O
- d) Al - **13 electrons**
- e) Ne
- f) K

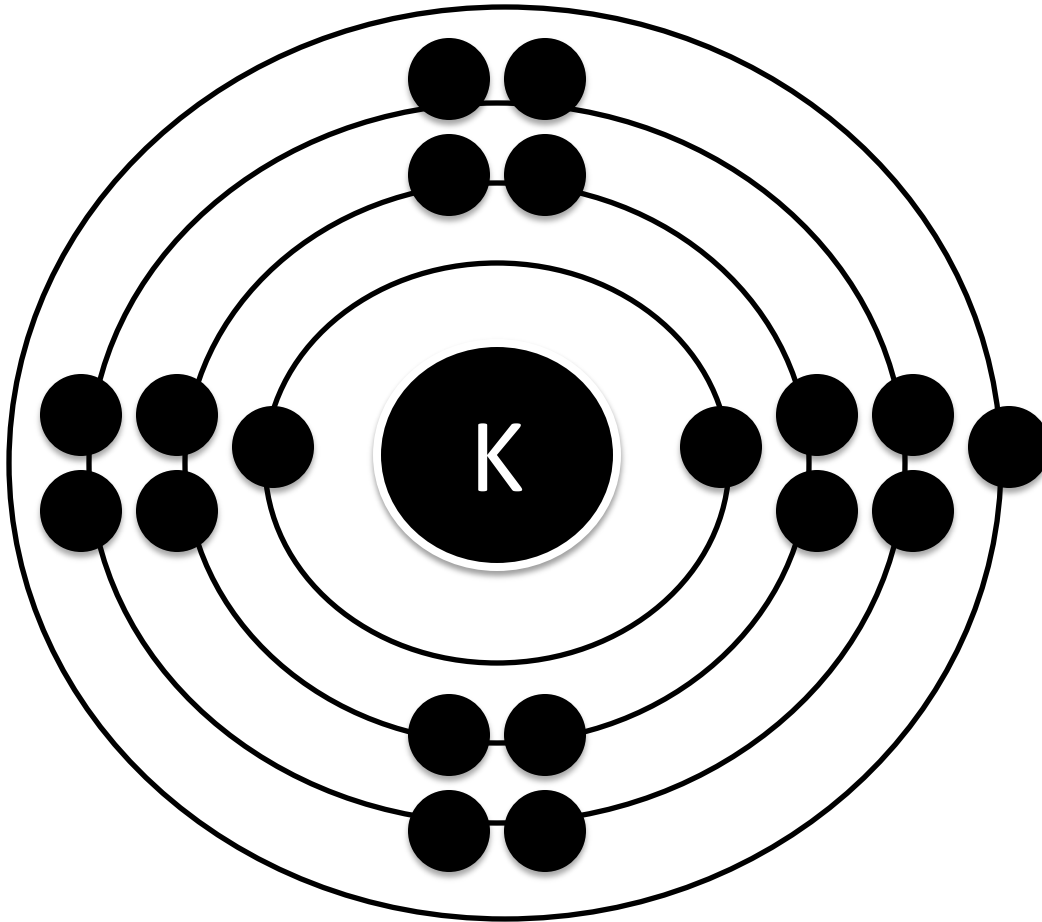
Bohr Diagrams



Try the following elements on your own:

- a) H
- b) He
- c) O
- d) Al
- e) Ne - **10 electrons**
- f) K

Bohr Diagrams



Try the following elements on your own:

- a) H
- b) He
- c) O
- d) Al
- e) Ne
- f) K - **19 electrons**

Bohr Diagrams

You should now be able to draw a Bohr Model for the first 20 elements in the periodic table.

Any Questions?