

## A Planetary Model of the Atom

BOHR

Niels Bohr, suggested the following:

- electrons can move around the nucleus in nearly circular orbits
- each electron has a specific amount of energy
- the farther away from the nucleus the greater the amount of energy
- electrons cannot exist 'between' these orbits, but can move up and down from one orbit to another
- the order of filling these orbits is 2, 8, 8 for the the first three orbits
- electrons are more stable at lower energy, closer to the nucleus

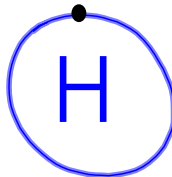
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**Bohr Diagrams** the element symbol is written in the center and the electrons are 'filled' into the orbits around this nucleus

Example:

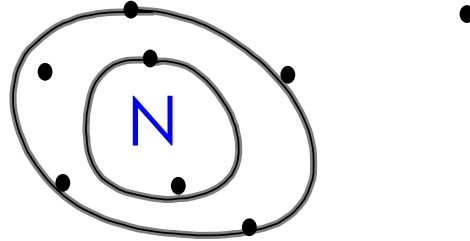
Hydrogen has 1 proton, and 1 electron

● Electron



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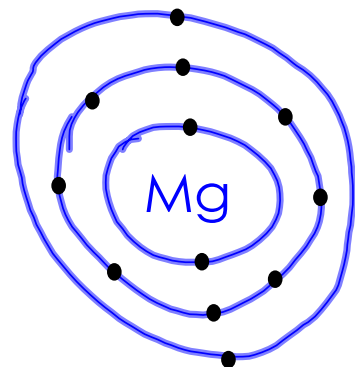
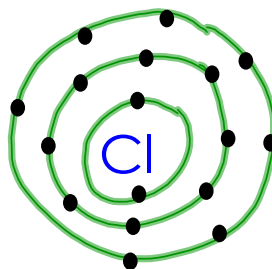
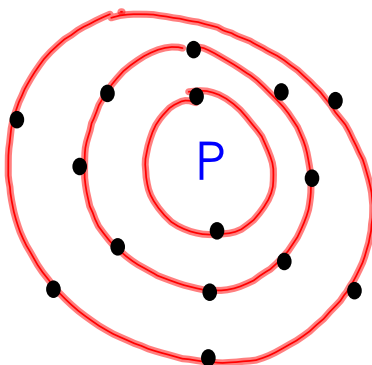
Nitrogen has 7 protons and 7 electrons  
(Hint: remember 2,8,8)



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Try these!  
determine the # of protons and electrons  
Dont forget the 2, 8, 8

● Electron



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