

The total number of electrons increases as atomic number increases.

Electron Configuration

1	s ¹	s ²											p ¹	p ²	p ³	p ⁴	p ⁵	He
2													2p					Ne
3			d ¹	d ²	d ³	d ⁴	d ⁵	d ⁶	d ⁷	d ⁸	d ⁹	d ¹⁰	3p		P			Ar
4			3d					Fe					4p					Kr
5			4d										5p					Xe
6			5d										6p					Rn
7			6d															

4f																		
5f																		

2

Aufbau Principle: electrons will fill the lowest energy levels ~ closest to the nucleus ~ first.

e- Configuration:
how electrons are
arranged around
the nucleus

Electrons want to be close to the stage!

These are
odd shapes!

s ○ □

p ○ ○ ○ □ □ □

d ○ ○ ○ ○ ○ □ □ □ □ □

f ○ ○ ○ ○ ○ ○ ○ □ □ □ □ □ □ □ □

Orbital Shapes

Row
2p³
Seat
Section

-or-

n=2
energy
levels
2p³
of e-
orbital
(s, p, d, f)

Hund's Rule (Bus Seat Rule):

e- will fill up every orbital □
spinning in the same direction ↑
before pairing up. ↑↓

Pauli Exclusion Principle:

e- cannot be in the same
orbital □ unless they
have opposite spins. ↑↓