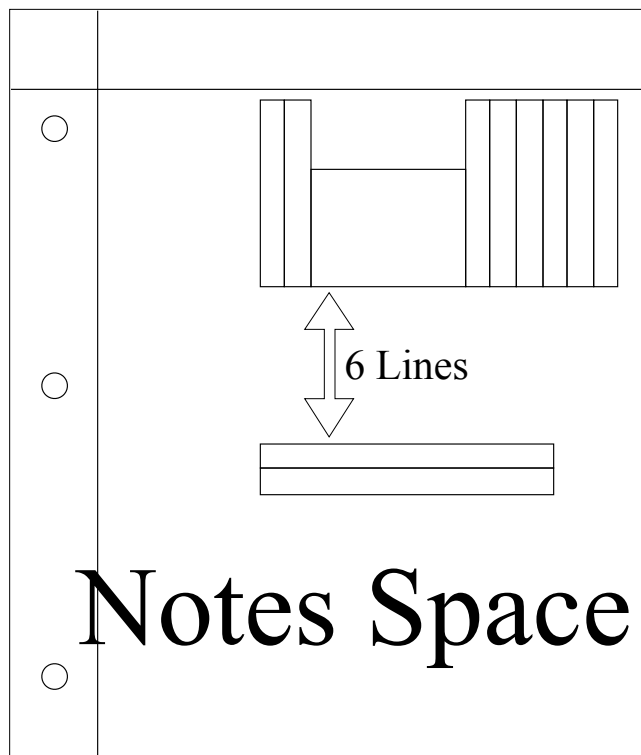


Periodic Trends

Periodic Trends

Notes Layout



Basic Vocabulary

[illegible]

- Periods
 - Horizontal rows
- Groups
 - Vertical Columns

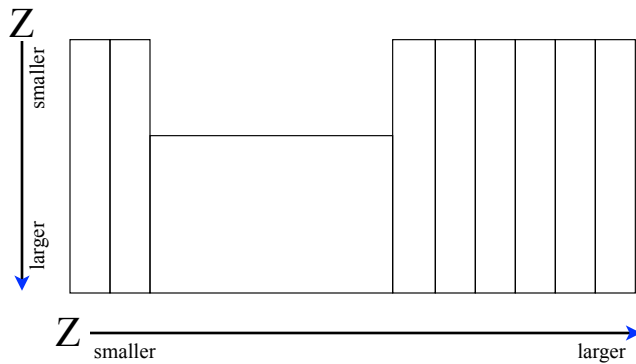
Basic Vocabulary

1	2		3	4	5	6	7	8
A l k a l i	A l k a l i n e	Transition Metals					H a l o g e n s	N o b l e
M e t a l s	E a r t h							G a s e s

Lanthanoids
Actinoids

Periodic Trends

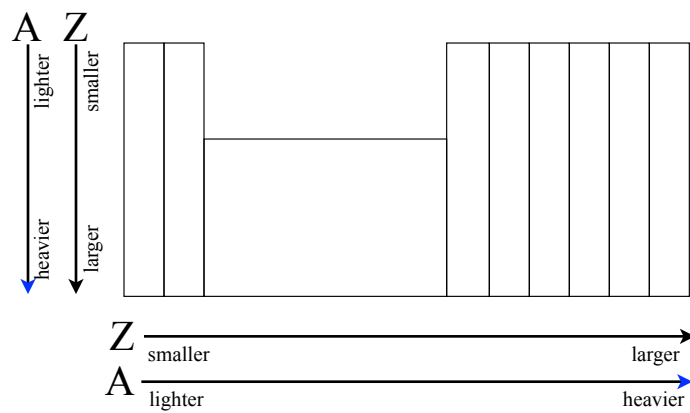
Periodic Trends



- Atomic Number
 - Number of P^+ in the nucleus

Periodic Trends

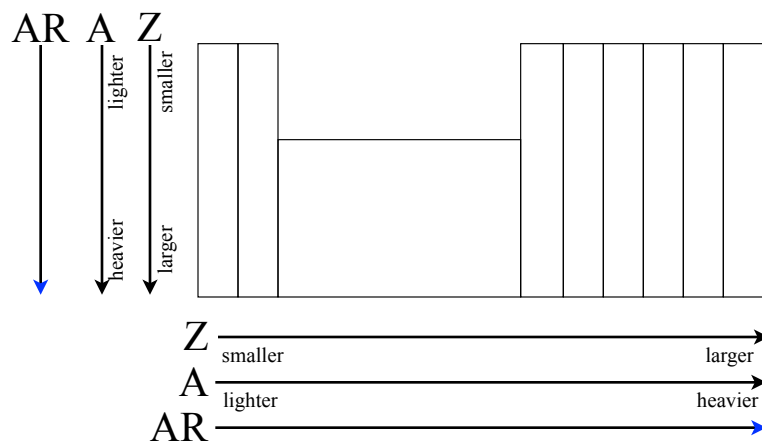
Periodic Trends



- Atomic Mass
 - Number of P^+ & N^0

Periodic Trends

Periodic Trends

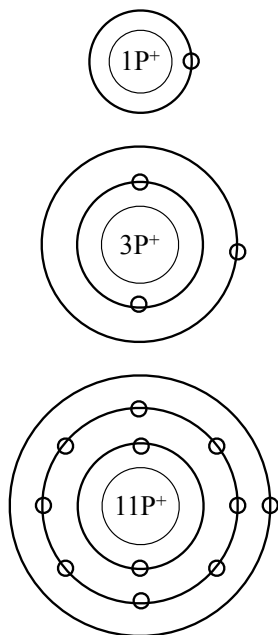


- Atomic Radius
 - The distance between the nucleus and the valence electron shell
 - Down a group
 - Increases due to additional energy levels

Periodic Trends

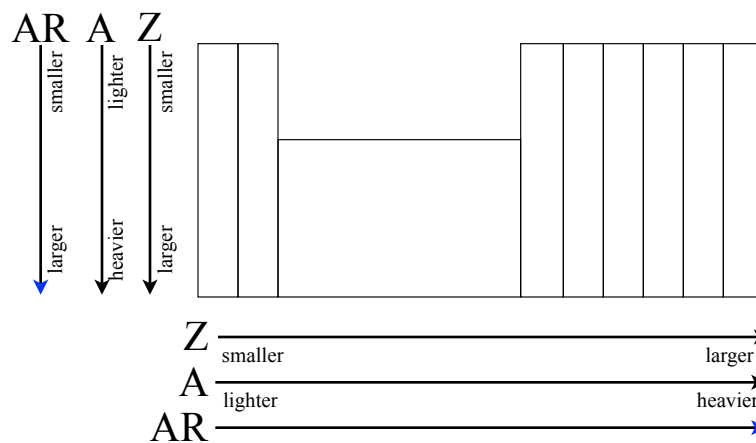
Atomic Radius

Group 1



Periodic Trends

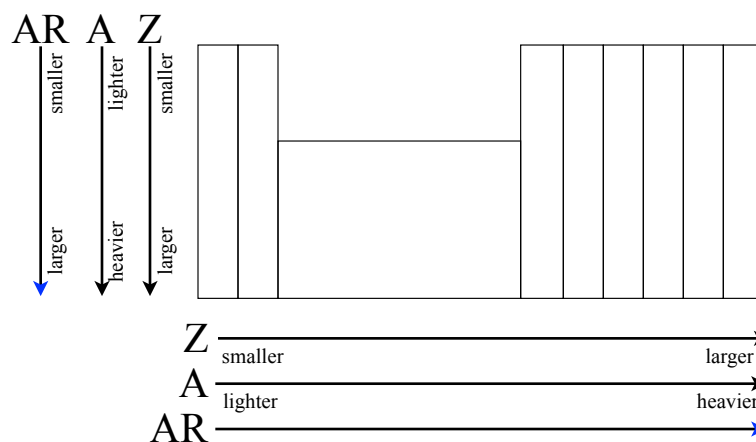
Periodic Trends



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Periodic Trends

Periodic Trends

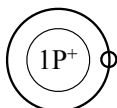


- Atomic Radius
 - Across a period
 - Decrease due to increased effective nuclear charge

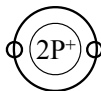
Periodic Trends

Atomic Radius

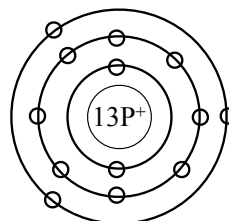
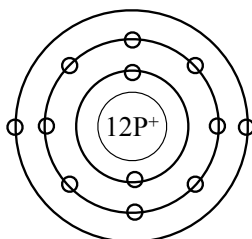
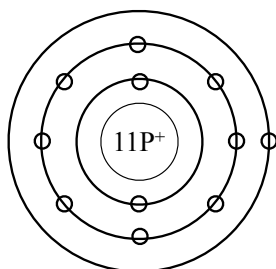
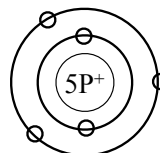
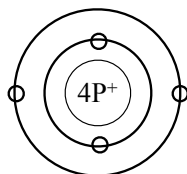
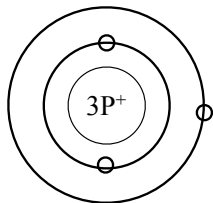
Group 1



Group 2/(8)

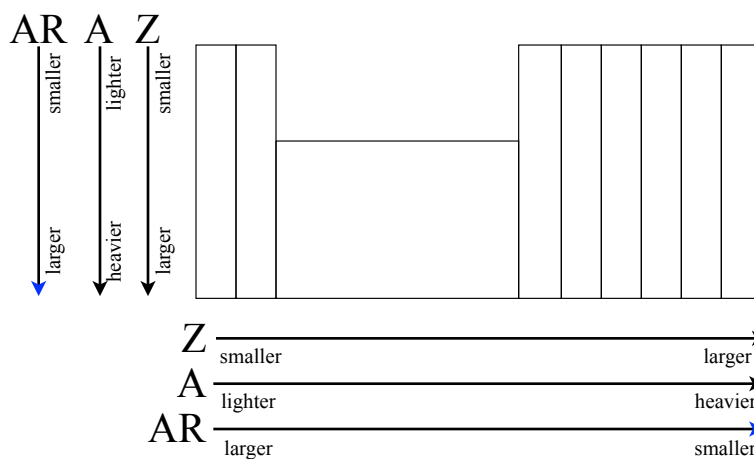


Group 3



Periodic Trends

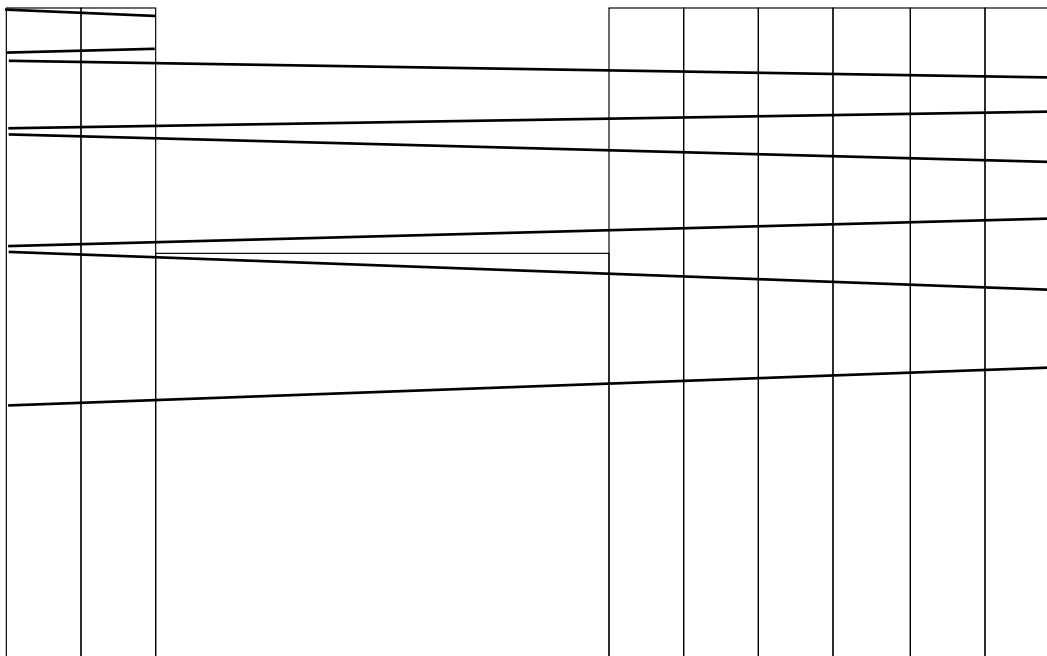
Periodic Trends



- Atomic Radius
 - Across a period
 - Decrease due to increased effective nuclear charge

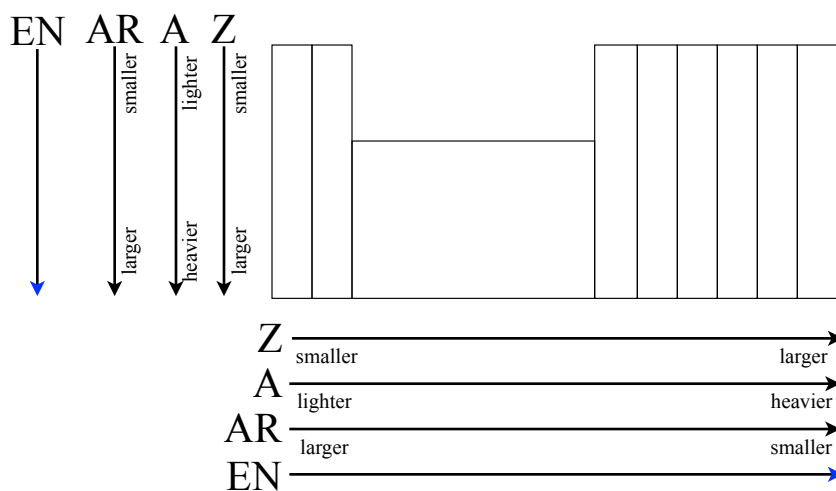
Periodic Trends

Atomic Radius



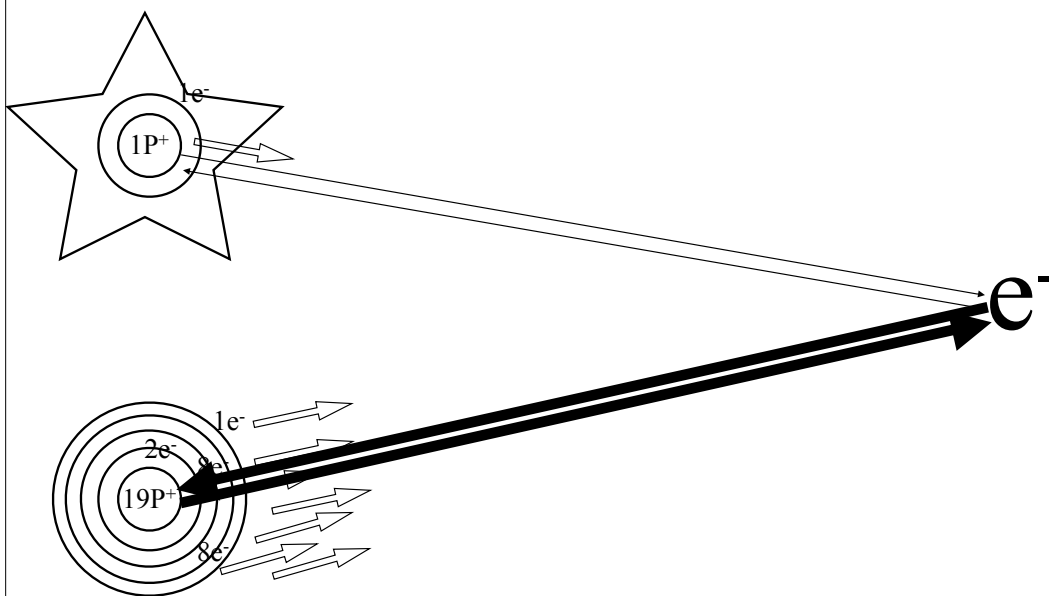
Periodic Trends

Periodic Trends



- Electronegativity
 - An atom's ability to steal electrons from other atoms
 - "Stealing Power"
 - Depends on shielding
 - Interference caused by electrons surrounding the nucleus

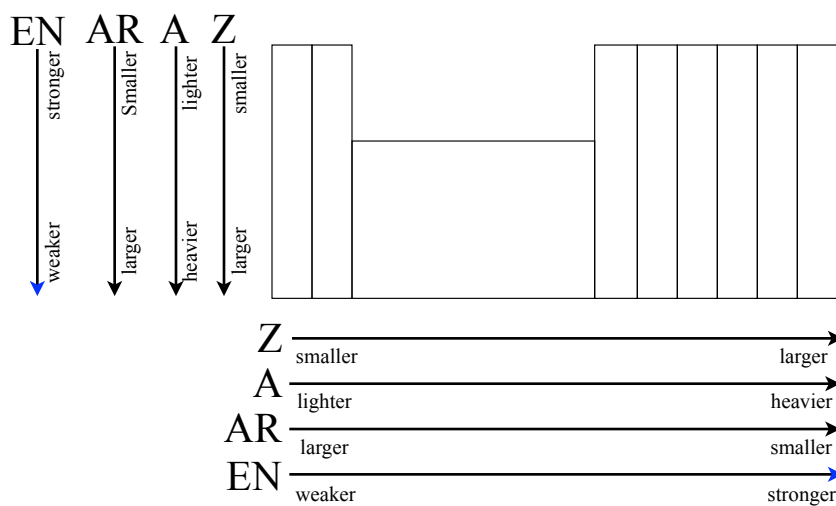
Periodic Trends



“Smaller is Stronger”

Periodic Trends

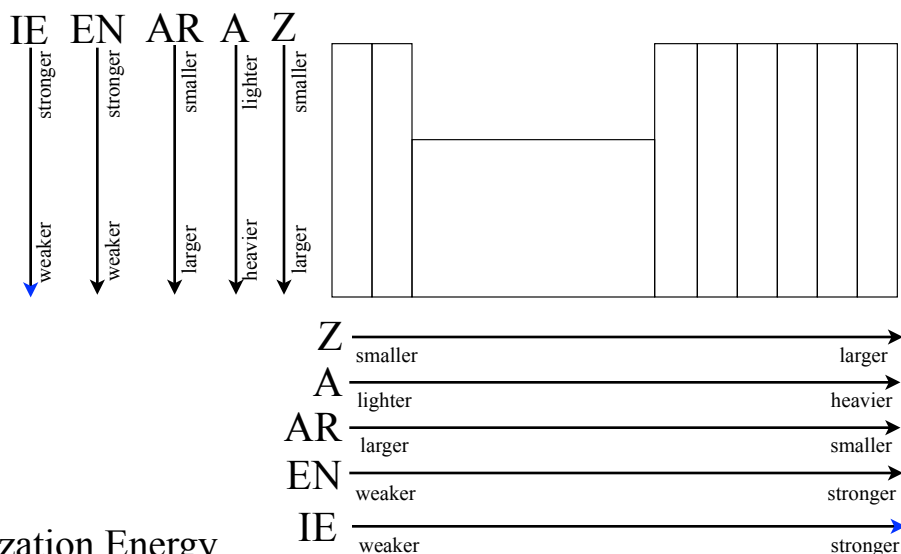
Periodic Trends



- Electronegativity
 - An atom's ability to steal electrons from other atoms
 - “Stealing Power”
 - Depends on shielding
 - Interference caused by electrons surrounding the nucleus

Periodic Trends

Periodic Trends



- Ionization Energy
 - The amount of energy needed to remove an electron
 - “Keeping Power”
 - “smaller is stronger”

Periodic Trends

Metals and Non-Metals

- Metals
 - Few valence electrons
 - Big & Weak
 - Lose electrons
 - Form cations
 - Conduct heat and electricity
 - Tend to be solids....
 - hard, shiny, ductile, malleable
- Non-metals
 - Many valence electrons
 - Small & Strong
 - Gain electrons
 - Form anions
 - Insulate
 - Can be solids, liquids or gases....
 - Solids tend to be brittle