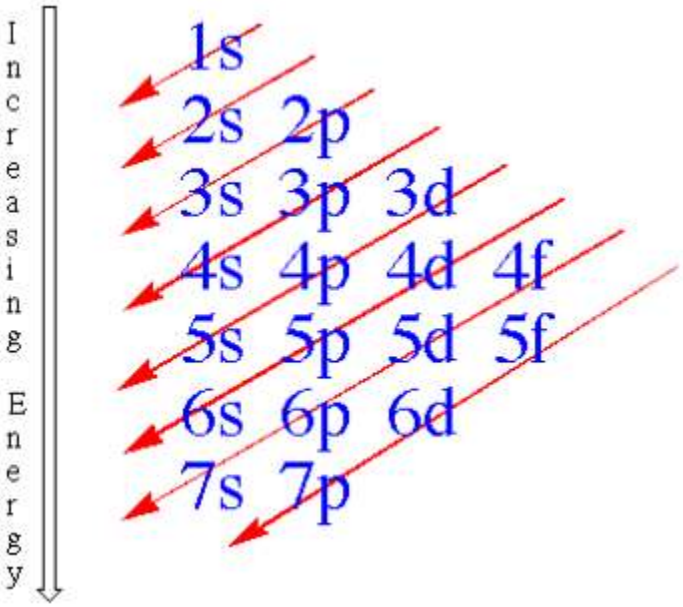
May 19, 2014

Get your quiz back at the end of this period.

Big test this Friday.

Purpose: How do we draw electron boxes and arrows from memory?

#1 (warmup) copy the pine tree from the board



#2 How many boxes for each orbital type:

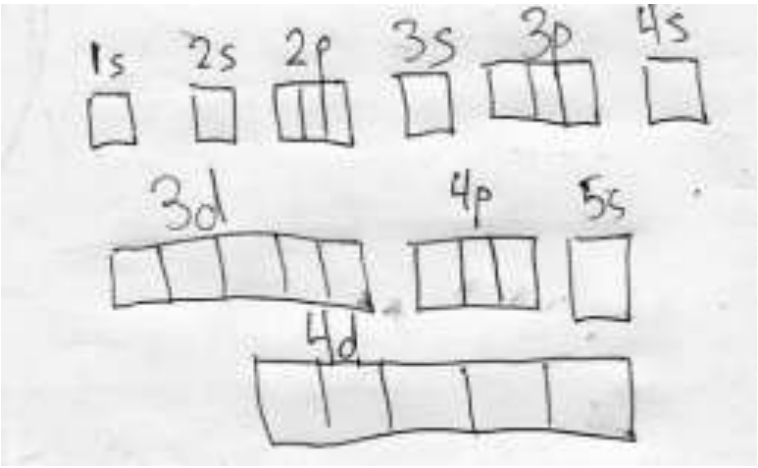
Orbital shape	Number of boxes
s	1
p	3
d	5
f	7

#3 How to draw boxes (orbitals) from memory:

a. Drawing a diagonal line through your pine tree will tell you which order to write the orbitals.

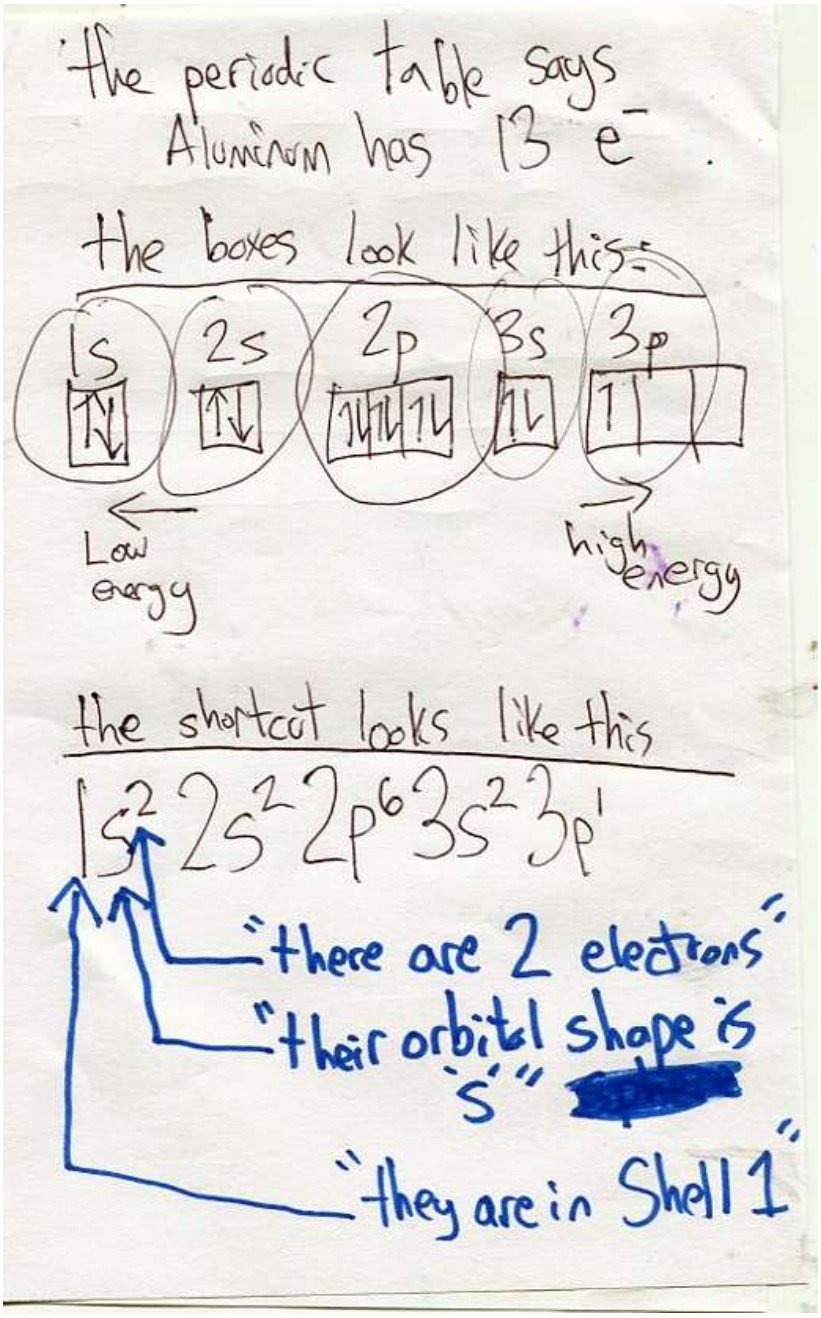
b) Your chart, above, will tell you how many boxes to draw.

Example, Draw a bunch of empty orbitals with no electrons in them



#4

For an atom of aluminum draw the Electron Configuration (boxes and arrows, and then shortcut style)



#5 the outermost shell is called the VALence shell

How many e^- are in the valence shell of each?

$1s^2 2s^2 2p^6 3s^1$ one e^- in the valence shell

$1s^2 2s^1$ one e^- in the valence shell

$1s^2 2s^2 2p^3$ five e^- are in the valence shell

How to draw electron configurations the third way

CAeMis+ry: http://genest.weebly.com

Stop in for help every day at lunch and Tues, Weds., &Thurs after school!

After-hours question? Email me at home: eagenest@madison.k12.wi.us

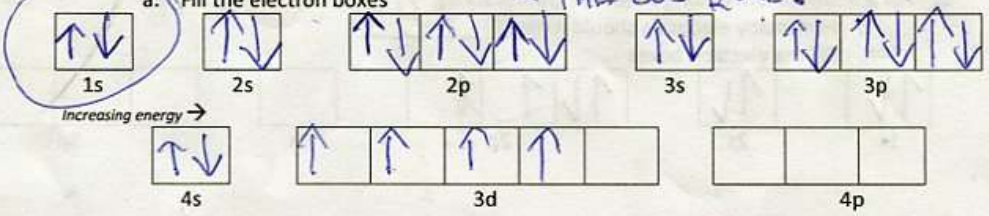
Name_____

Period_____

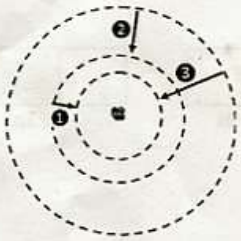
Assume all atoms

RULES - FILL LOWEST BOXES FIRST
- MAXIMUM OF 2 ARROWS PER BOX
- THE BUS RULE.

1. ~~For~~ an atom with 24 electrons,
   a. Fill the electron boxes



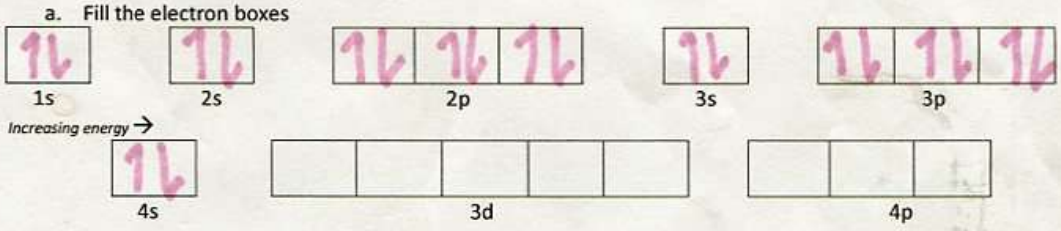
1. If one electron moves from n=2 to n=4 the atom will (emit / absorb) a photon



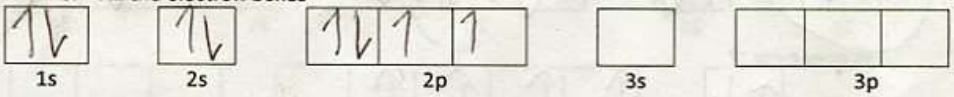
1. Lines 1, 2, and 3 all represent an electron dropping down. When this happens the atom will
   a. Emit a photon
   b. Absorb a photon
   c. Emit a proton
   d. Absorb a proton

2. Of these three electron movements, which is the highest energy?
   a. transition 1
   b. transition 2
   c. transition 3

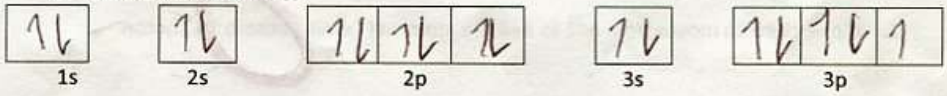
3. If transition 1 and transition 2 make an orange photon and a green photon, respectively, what color photon might transition 3 make? BLUE OR VIOLET (I will accept any reasonable answer).
4. For an atom with 20 electrons,
   a. Fill the electron boxes



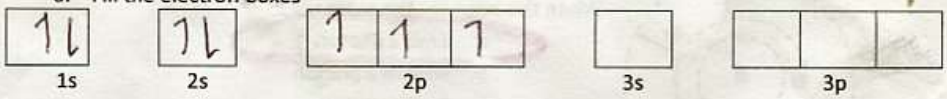
5. For a neutral atom of oxygen [in the ground state],
   a. How many electrons should it have? 8
   b. Fill the electron boxes



6. For an atom with 17 electrons,
   a. Fill the electron boxes



7. For an atom with 7 electrons,
   a. Fill the electron boxes



8.