

Name: _____

Block: _____

Electron Configuration Activity

The purpose of this activity is to understand how an element's position on the periodic table is related to its electron configuration. We will use marbles to represent electrons.

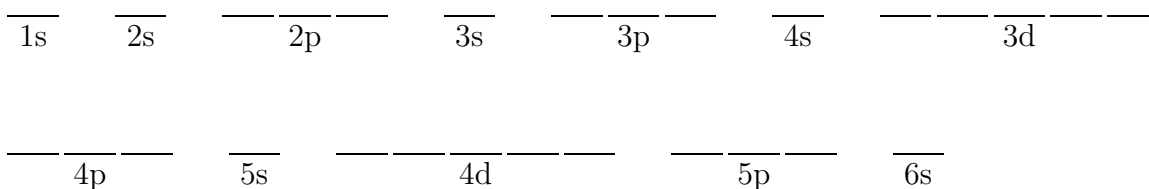
Directions

For each element:

- Find the element on the periodic table.
- From the information on the periodic table, write down:
 - the total number of electrons it has (assume it's neutral)
 - the highest sub-level that contains electrons
 - the number of electrons in that sub-level
- Count out as many marbles as the number of electrons the element has.
- Place the marbles on the periodic table board, starting with #1 (hydrogen) and working your way up by atomic number until you have used all of the marbles.
- Draw the electron configuration of the element, using orbital notation (representing each electron as an arrow).

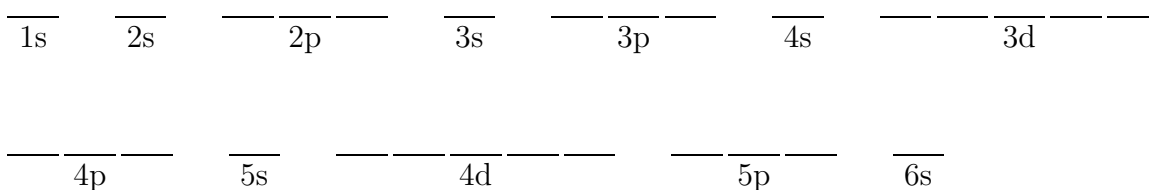
1. lithium (${}_3\text{Li}$)

total # electrons: _____ highest sub-level: _____ # e^- in highest sub-level _____



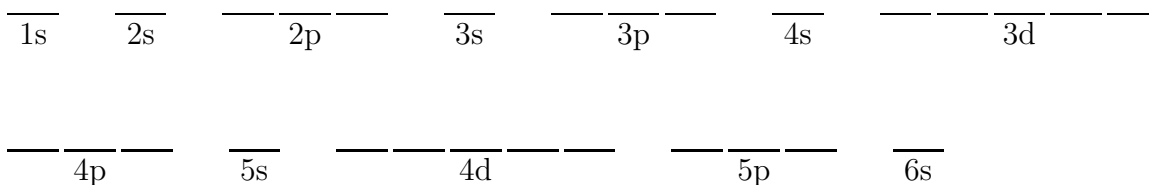
2. oxygen (${}_8\text{O}$)

total # electrons: _____ highest sub-level: _____ # e^- in highest sub-level _____



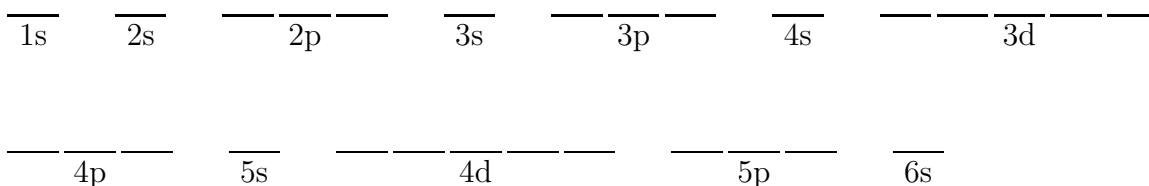
3. magnesium (${}_{12}\text{Mg}$)

total # electrons: _____ highest sub-level: _____ # e^- in highest sub-level _____



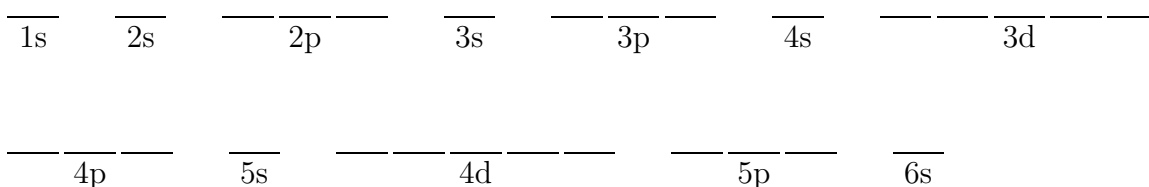
4. sulfur (${}_{16}\text{S}$)

total # electrons: _____ highest sub-level: _____ # e^- in highest sub-level _____



5. iron (${}_{26}\text{Fe}$)

total # electrons: _____ highest sub-level: _____ # e^- in highest sub-level _____



6. tungsten (${}_{74}\text{W}$) (without using marbles)

total # electrons: _____ highest sub-level: _____ # e^- in highest sub-level _____

