Chem Homework:
Atomic Models and Isotopic Symbols

Draw the **Bohr Model** for the elements listed based upon the isotopic symbol provided. Determine how many valence and core electrons each model has below your diagram.

1) \[ ^{16}O^{2-} \]

Valence e-: 
Core e-: 

2) \[ ^{40}K^{+} \]

Valence e-: 
Core e-: 

Write the isotopic symbol for the elements diagramed below.

3) 

Isotopic Symbol: 

4) 

Isotopic Symbol: 

Name ____________________
Block ____ Date ____________
5) Rewrite the isotopic symbol you figured out for question #4: __________

How would this symbol change if the following changes to the atom occur?

a. You add an electron to the original atom.
   
   New isotopic symbol = __________

b. You remove a proton from the original atom.
   
   New isotopic symbol = __________

c. You add two neutrons to the original atom.
   
   New isotopic symbol = __________

6) Redraw a short hand Bohr Model of the atom in question #2 below.

What is the nuclear charge of this atom? __________

What is the effective nuclear charge felt by an electron in the 1st energy level? __________

What is the effective nuclear charge felt by an electron in the 2nd energy level? __________

What is the effective nuclear charge felt by an electron in the valence energy level? __________