Atomic model worksheet

1. Where did Rutherford believe the protons were found? _____, are they actually found there? _____

2. Where did Rutherford believe the electrons were found? _____, are they actually found there? _____

3. How did Bohr improve Rutherford's model? _____
   _____
   _____

4. What is the maximum number of electrons orbit 1 can hold? _____ Orbit 2 _____ Orbit 3_____ and orbit 4 _____

5. Where would the number of protons be located on a periodic table? _____
   _____

6. How can you determine the number of electrons a neutral atom has? _____

7. If oxygen has 8 protons, how many electrons would it have? _____

8. When do you know to use the next orbital when placing the electrons? _____
   _____

9. Make a Bohr-Rutherford model for the following elements:

Aluminum	Nitrogen	Argon
Hydrogen	Calcium	Sodium

10. Rutherford modified the atomic model after doing experiments where alpha particles were dispersed be a sheet of gold foil. Consider the following statements:

1- The number of protons is equal to the number of electrons
2- Protons are concentrated in a small positive space at the center of the atom
3- Atoms consist of mostly empty space
4- Electrons are contained in a positive sphere made up of protons
5- Electrons move about in specific energy levels

Which of these statements are based on Rutherford's experiments?

A) 1 and 2 B) 1 and 4 C) 2 and 3 D) 3 and 5