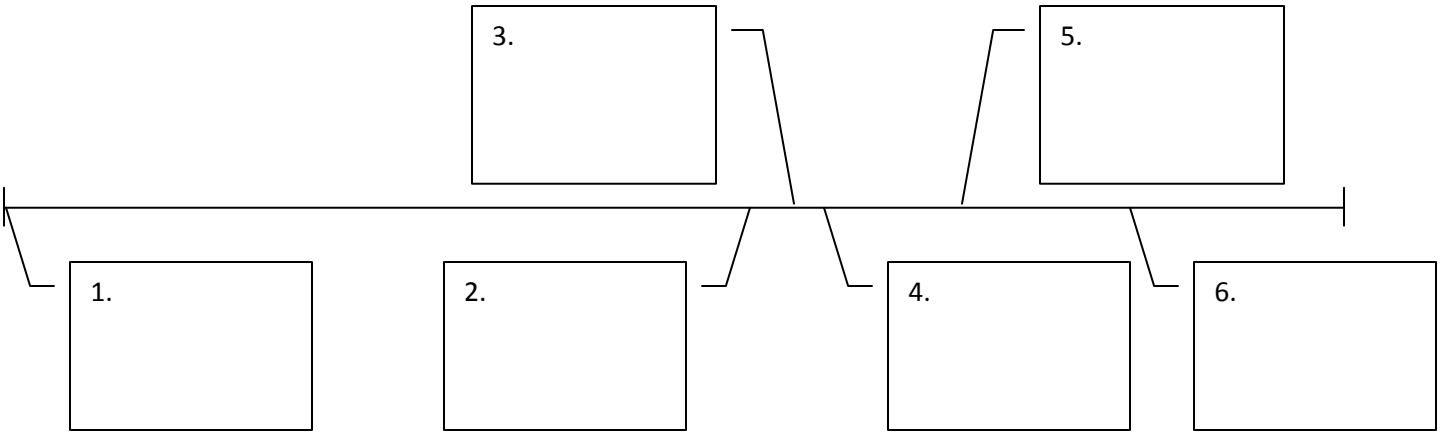
Name: _____ Grade/Class: _____

Unit 03 Review – Atomic Theory and Structure

1. Fill in the following timeline to show the important discoveries in the atomic theory.



2. **Explain** J.J. Thomson's cathode ray tube experiment (including what he did, what the results were and how it contributed to his new atomic model).

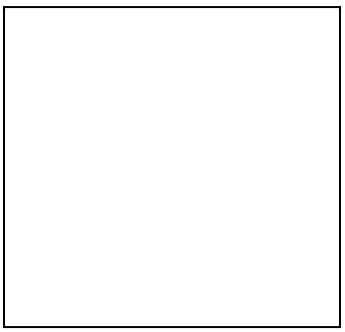
3. **Explain** Ernest Rutherford's gold foil experiment (including what he did, what the results were and how it contributed to his new atomic model).

4. Write **both** electron configurations and orbital diagrams for the following elements:

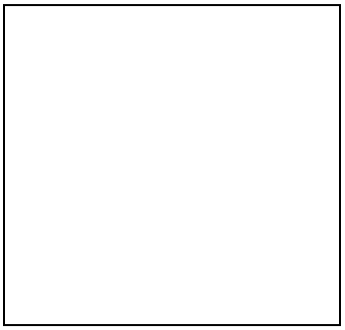
    a. Chlorine

    b. Iridium

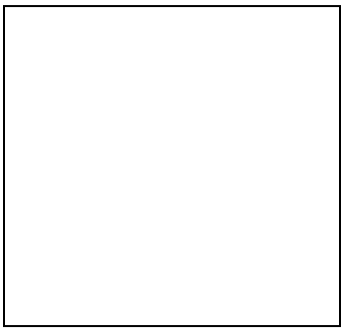
5. **Draw and label** the following models (<u>NOT the experiments</u>) of the atom in the space provided.



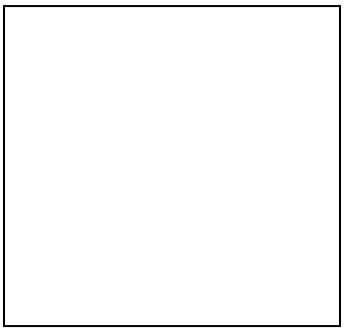
Dalton's Model



Thomson's Model



Rutherford's Model



Bohr's Model

6. What did Niels Bohr discover about electrons and how did it change the model of the atom?

7. Draw Bohr atomic models and Lewis Dot diagrams for the following atoms:

<u>Phosphorous</u> <u>Beryllium</u>

	Element Name	Protons	Neutrons	Electrons	Mass	Isotope
8.	Helium			2	5	
9.	Cobalt		33			
10.						$^{243}_{95}$Am