

Early History of the Atom Homework

- 1) Thomson used a cathode ray tube to discover the electron. Sketch this apparatus and explain how Thomson was able to deduce that the electron existed from the experimental results.
- 2) There have been several different models of the atom in the last hundred and fifty years. Originally, atoms were thought to be indestructible spheres, followed in quick succession by Thomson's Plum Pudding model and Rutherford's nuclear model. Sketch each of these models and compare and contrast their view of the atom.
- 3) Explain why both Thomson and Rutherford's experiments unable to deduce the existence of the neutron.
- 4) If atoms really conformed to the plum pudding model of the atom, what would the results of Rutherford's experiment have been? Explain your answer, using diagrams if necessary.