

# Atomic Theory/Scientists Magic Square WS

Name: \_\_\_\_\_ Period: \_\_\_\_

**Directions:** Put the number of the definition from the list below into the square with the appropriate term. Check your answers by adding the numbers to see if all the sums of all rows, both across and down add up to the same number, the Magic #. (Hint: Use your notes, the glossary or index in the back of your chem. book, or pages 107-126.)

Democritus _____	Dalton _____	Thomson _____	Chadwick _____	Total _____
Rutherford _____	Proton _____	Atom _____	Bohr _____	_____
Quantum Mechanical Model _____	Neutron _____	Nucleus _____	Alpha particle _____	_____
Electron _____	Model _____	Schrodinger _____	Electron cloud _____	_____
Total _____	_____	_____	_____	

The Magic Number is

1. Represented by a symbol; all are found on the Periodic Table
2. Made a mental model of the atom; Greek philosopher
3. A double positive helium atom
4. Wrote and solved mathematical equations describing the location and energy of electrons
5. The positive particle in the nucleus of an atom
6. The tiny positive core of an atom; contains protons and neutrons
7. He studied ratios in which atoms combine in a chemical reaction
8. Discovered the nucleus using his gold foil experiment
9. Current explanation of where electrons might be found in the atom
10. Used by scientists to explain something we can not see or understand
11. The smallest particle of an element that has the properties of that element
12. Discovered the neutron
13. Current model of the atom; proposed by Schrodinger
14. Mass of protons and neutrons
15. Developed the model of the atom in which electrons orbit the nucleus in energy levels
16. The negative particle that circles the nucleus
17. The neutral particle in the nucleus of an atom
18. Proposed the "plum-pudding" model of the atom; discovered the electron.