


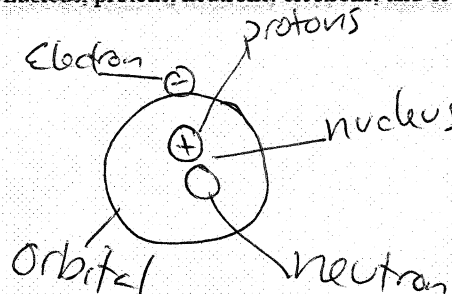



All sections marked with a  are considered essential concepts and must be completed to receive full credit on WS.

1. Proton <u>C</u>	A. Particles with no charge found in the nucleus of atoms. 	1. Dalton <u>E</u>	A. Discovered that atoms have a nucleus.
2. Neutron <u>A</u>	B. Center of the atom: contains protons and neutrons.	2. Bohr <u>D</u>	B. Discovered the electron. 
3. Electron <u>E</u>	C. Positively charged particle in the nucleus of the atom. Determines the element.	3. Democritus <u>C</u>	C. Realized that there was a smallest part of matter.
4. Nucleus <u>B</u>	D. The smallest part of an element or molecule. Building block of all things.	4. Rutherford <u>A</u>	D. Discovered that electrons are in distinct orbits.
5. Atom <u>D</u>	E. Negative particles in orbits around the atom.	5. Thompson <u>B</u>	E. Theorized that atoms cannot be changed chemically.

Draw a picture of an atom, using the Bohr model. Be sure to label the nucleus, protons, neutrons, electrons, and orbitals.



1. Molecule <u>C</u>	A. Smallest part of an element. Can only be split by nuclear means. 
2. Compound <u>B</u>	B. Any combination of two or more elements.
3. Atom <u>A</u>	C. Any combination of two or more atoms, whether the same or different.
4. Element <u>D</u>	D. A substance in which all the atoms are the same.

Name the subatomic particles that make up the atom. 

Protons, Neutrons, Electrons

The number of protons tells you the element.

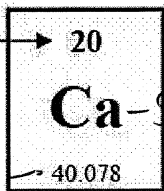
The number of electrons tells you the ion.

The number of neutrons tells you the isotope.

How did the Rutherford experiment prove the existence of the nucleus?

Most alpha particles passed through the atom, but some were deflected by the nucleus.

Atomic #
(number of protons)



Atomic mass

Find the atomic number of:

- A) Fe: 26
 B) K: 19
 C) Ni: 28
 D) Al: 13

Find the elements:

- A) 8 protons: O
 B) 6 protons: C
 C) 15 protons: P
 D) 86 protons: Rn

Give the charges for the following: 

1 electron (e): -

2 electrons (2 e): -2

2 p + 2 e: 0

3 p + 3 n + 2 e: +1

1 proton (p): +

4 protons (4 p): +4

4 p + 2 n: +2

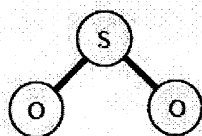
6 p + 7 n + 8 e: -2

1 neutron (n): 0

3 neutrons (3 n): 0

1 n + 3 p: +3

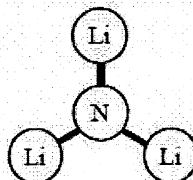
9 p + 10 n + 10 e: -1



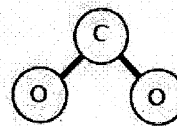
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 Elements: 2
 Molecules: 1
 Compounds: 1



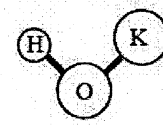
Atoms: 2
 Elements: 1
 Molecules: 1
 Compounds: 0



Atoms: 4
 Elements: 2
 Molecules: 1
 Compounds: 1



Atoms: 3
 Elements: 2
 Molecules: 1
 Compounds: 1



Atoms: 3
 Elements: 3
 Molecules: 1
 Compounds: 1