

Name:

Date:

Hour:

Chemistry – Ch.4 Quiz

1) Prepare a chart showing three subatomic particles, give the relative *charge*, relative *mass*, and location of each.

Particle	Location	Relative mass	Relative charge
Proton	Nucleus	1	+1
Neutron	Nucleus	1	0
Electron	Orbiting nucleus	0	-1

2) Find the number of protons, neutrons, and electrons in the following:

	<u>Protons</u>	<u>Neutrons</u>	<u>Electrons</u>
a) Lithium	3	4	3
b) Carbon	6	6	6
c) Magnesium	12	12	12
d) Calcium	20	20	20
e) Phosphorus	15	16	15
f) Nickel	28	31	28
g) Oxygen	8	8	8
h) Calcium ~ 42	20	22	20
i) Ba ⁺²	56	81	54
j) F ⁻¹	9	10	10

3) Explain the difference between an *ion* and an *isotope*.

Ion ~ different # of *electrons*

Isotope ~ different # of *neutrons*

4) Provide *symbol* notation for Potassium:



5) Provide *hyphen* notation for Copper if it has 37 neutrons: **Copper -- 66**

6) Create a drawing and use the drawing to explain Rutherford's gold foil:
Need drawing AND explanation...

Circle the best answer

7) (Millikin, Thomson, **Rutherford**) found that the atom was mostly empty space.

8) An element with a different number of electrons is an (**ion**, isotope).

9) An element with a different number of neutrons is an (ion, **isotope**).

10) (**Protons**, Neutrons, Electrons) can NOT change and still be the same element.

11) The elements on the periodic table are arranged by (atomic mass, **atomic number**).

Short Answer

12) Write FOUR sentences about the atom. (4 pts)

BONUS: Write ANY quote or word of the day from last week:

Go Vikings!!