**Unit 3 review worksheet**

1. Draw the Bohr model of Silicon-32. You need protons, neutron, and the correct number of electrons on each energy level. (Planetary model)
2. What does 3d6 mean?
3. 3 =\_\_\_\_\_\_\_\_\_
4. d=\_\_\_\_\_\_\_\_\_
5. 6=\_\_\_\_\_\_\_\_\_
6. Draw the orbitals for this and place the electrons in them.
7. Whose law explain how to fill orbitals?
8. Whose law says to fill sublevels from lowest to highest energy?
9. Whose law says that only two electrons can occupy each orbital?
10. What element ends in 3d6?
11. Write the electron configuration for each of the following:
12. Phosphorus
13. Strontium
14. Write and draw the electron configuration for each of the following:
15. Nitrogen
16. Nickel
17. Answer the questions about the following waves- microwaves and gamma waves.
18. Which wave is bigger?
19. Which wave has a higher frequency?
20. Which wave has more energy?
21. List three methods for exciting an atom:
22. Explain how the electron produces electromagnetic radiation.
23. If green light has a wavelength of 5.8 x 10 -7 meters: (Show formula, plug in numbers with label, and answer with label. Use ½ sheet with equations.)
24. Calculate the frequency of the green light.
25. Calculate the amount of Energy you need to add to an atom to produce this green light.
26. Identify the following characteristics for Lithium

a. atomic number \_\_\_\_\_\_\_\_\_\_

b. average atomic mass \_\_\_\_\_\_\_\_\_\_

c. period \_\_\_\_\_\_\_\_\_\_

d. family \_\_\_\_\_\_\_\_\_\_

e. state of matter\_\_\_\_\_\_

f. metal, nonmetal, metalloid \_\_\_\_\_\_\_\_\_\_\_

g. physical property \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Identify the following characteristics for Krypton

a. atomic number \_\_\_\_\_\_\_\_\_\_

b. average atomic mass \_\_\_\_\_\_\_\_\_\_

c. period \_\_\_\_\_\_\_\_\_\_

d. family \_\_\_\_\_\_\_\_\_\_

e. state of matter\_\_\_\_\_\_

f. metal, nonmetal, metalloid \_\_\_\_\_\_\_\_\_\_\_

g. physical property \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Which of the following atoms is larger? (Pick one answer for a, one answer for b, etc.)
2. Chlorine or Iodine
3. Sodium or Aluminum
4. Which of the following elements has a higher ionization energy?
5. Chlorine or Iodine
6. Sodium or Aluminum
7. Which of the following elements has a higher electronegativity?
8. Oxygen or Sulfur
9. Potassium or Zinc
10. What happens to the size of Bromine when it becomes an Ion? What charge does it want to be?