Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

**WEEK 9 AGENDA: Unit 2 course website: kachemistry.weebly.com**

|  |  |  |
| --- | --- | --- |
| **Date** | **Topic** | **Homework** |
| **CB** | **PA** | **H** |
| M – Oct 27 | The Mole; Periodic Table Intro | 1; 2a-b; 3a-b; 4a-b | 1-3; 4a-c | 1-4 |
| T – Oct 28 | Mole to Atom/Molecule Conversion | 5a-b; 6a-b | 5a-c; 6a-c | 5-6 |
| W – Oct 29 | Mole to Grams Conversion | 7a-b; 8a-b | 7-8 | 7-8 |
| Th – Oct 30 | Atom/Molecule to Mole Conversion | 9a-b; 10a-b | 9a-c;10a-c | 9-10 |
| F – Oct 31 | Structure of the Atom; Skills Quiz | 11a-b;12a-b;13 | 11a-c;12a-c;13 | 11-13 |

**\*Complete the following problems on a separate sheet of paper in your chemistry notebook. SHOW ALL WORK TO RECEIVE FULL CREDIT! Remember for unit conversions you must show your work in a t-chart!**

|  |  |
| --- | --- |
| 1. What does each letter of the box represent?

Macintosh HD:Users:leighaingham:Desktop:Screen Shot 2014-10-22 at 8.48.36 PM.png1. Use your periodic table to determine the **symbols** for the following elements **AND** the number of protons, neutrons, and electrons:
2. Gold
3. Nitrogen
4. Carbon
5. Iron
6. Use your periodic table to determine the **names** for the symbols below **AND** the number of protons, neutrons, and electrons:
7. Silver
8. Magnesium
9. Sodium
10. Calcium
11. Use the T-Chart method to answer the following questions (show ALL work):
12. How many donuts are in 6.5 dozen donuts?
13. How many minutes are in 2 days?
14. How many minutes are in 2.5 weeks?
15. How many seconds are in 5 weeks?
16. Calculate the number of atoms/molecules in the following quantities:
17. 5.25 moles Aluminum
18. 1.65 moles Carbon
19. 2.55 x 10-15 moles Oxygen
20. 0.0045 moles Calcium
21. Calculate the number of moles in each of the following quantities:
22. 6.022 x 1024 atoms of cobalt
23. 1.06 x 1023 atoms of tungsten
24. 3.008 x 1019 molecules of water
25. 950000000 molecules of sugar
 | 1. Calculate the number of moles in each of the following masses:
2. 0.039 g of palladium
3. 8200 g of iron
4. 0.0073 ***kg*** of tantalum
5. Calculate the mass in grams of each of the following amounts:
6. 1.002 mol of chromium
7. 550 mol of aluminum
8. 4.08 x 108 mol of neon
9. Calculate the number of atoms in each of the following masses:
10. 54.0 g of aluminum
11. 69.45 g of lanthanum
12. 0.697 g of gallium
13. 0.000000020 g beryllium
14. Calculate the mass of the following numbers of atoms:
15. 6.022 × 1024 atoms of tantalum
16. 3.01 × 1021 atoms of cobalt
17. 1.506 × 1024 atoms of argon
18. 1.20 × 1025 atoms of helium
19. Determine the number of moles in each of the following:
20. 3.00 g of boron (B)
21. 0.472 g of sodium (Na)
22. 7.50 × 102 g of methanol, CH3OH

d. 50.0 g of aluminum chloride, Al2O3 12. Determine the mass of each of the following amounts:1. 1.366 mol of nitrogen (N)
2. 0.120 mol of calcium (Ca)
3. 6.94 mol barium chloride, BaCl2
4. 0.005 mole of propane, C3H8
5. Define the following parts of the atom AND their location:
6. Proton
7. Neutron
8. Electron
9. Nucleus
 |

**Answers to Agenda Problems #9-12**

9a. **1.21× 1024 atoms atoms Al**

9b. **3.011 × 1023 atoms La**

9c. **6.02 × 1021 atoms Ga**

9d. **1.3× 1015 atoms Be**

10a. **1810.g Ta or 1.810 x 103 g Ta**

10b. **0.295 g Co**

10c. **99.91 g Ar**

10d. **79.7 g He**

11a. **0.278 mol B**

11b. **0.0205 mol Na**

11c. **23.4 mol CH3OH**

11d. **0.490 mol Al2O3**

12a. **19.13 g N**

12b. **4.81 g of Ca**

12c. **1.45 × 103 g of BaCl2**

12d. **0.2 g C3H8**