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.png   1. 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**