Unit 8 Stoichiometry
Intro to 1 Step Conversions

Name _____

Block # ____

Part A: Converting with Atoms and Moles

1. Explain how to convert from atoms to moles.

2. Calculate the number of atoms in 0.50 mole of carbon.

3. Calculate the number of atoms in 1.75 moles of neon gas.

4. Calculate the number of moles in 3.47×10^{25} atoms of beryllium.

5. Calculate the number of moles in 1.25×10^{19} atoms of gold.

Part B: Converting with Molecules and Moles

6. Explain how to convert from molecules to moles.

7. Calculate the number of molecules in 7.4 moles of oxygen gas.

8. Calculate the number of molecules in 3.15 moles of propane gas.

9. Calculate the number of moles in 2.80×10^{17} molecules of phosphorus trichloride.

10. Calculate the number of moles in 1.09×10^{24} molecules silicon dioxide.

Part C: Converting with Grams and Moles

11. Explain how to convert from grams to moles.

12. Calculate the number of grams in 1.23 moles of aluminum hydroxide.

13. Calculate the number of grams in 0.089 moles of water.

14. Calculate the number of moles in 200.0 grams of sodium chloride.

15. Calculate the number of moles in 75.20 grams of ammonia.

Part D: Converting with Liters and Moles

1. Explain how to convert from liters to moles.

2. Calculate the number of liters in 2.5 moles of hydrogen gas.

3. Calculate the number of liters in 0.017 moles of water vapor.

4. Calculate the number of moles in 56.0 liters of butane gas.

5. Calculate the number of moles in 0.00280 liters of nitrogen gas.