**Moles, Molecules, and Grams Worksheet**

*Remember: 1 mol = molar mass (periodic table)*

*1 mol = 6.022x1023 atoms/molecules/formula units*

*1 mol = 22.4 L*

1) How many molecules are there in 24 grams of FeF3? (**1.28 x 1023 molecules)**

2) How many molecules are there in 450 grams of Na2SO4? (**1.91 x 1024molecules)**

3) How many grams are there in 2.3 x 1024 atoms of silver? (**421 grams)**

4) How many grams are there in 7.4 x 1023 molecules of AgNO3? (**209 grams)**

5) How many grams are there in 46.0 L of H2SO4? (**201 grams)**

6) How many liters are there in 122 grams of Cu(NO­3)2? (**14.6 L)**

7) How many liters are there in 9.4 x 1025 molecules of H2? **(3500 L)**

8) How many molecules are there in 230 grams of CoCl2? (**1.07 x 1024 molecules)**

9) How many molecules are there in 2.3 grams of NH4SO2?

10) How many grams are there in 3.3 x 1023 molecules of N2I6?

11) How many molecules are there in 200 grams of CCl4?

12) How many grams are there in 1 x 1024 molecules of BCl3?

13) How many grams are there in 4.5 x 1022 molecules of Ba(NO­2)2?

14) How many molecules are there in 9.34 grams of LiCl?

15) How many grams do 4.3 x 1021 molecules of UF6 weigh?

16) How many molecules are there in 230 grams of NH4OH?

**Moles, Molecules, and Grams Worksheet – Answer Key**

1) How many molecules are there in 24 grams of FeF3? **1.28 x 1023 molecules**

2) How many molecules are there in 450 grams of Na2SO4? **1.91 x 1024molecules**

3) How many grams are there in 2.3 x 1024 atoms of silver? **421 grams**

4) How many grams are there in 7.4 x 1023 molecules of AgNO3? **209 grams**

5) How many grams are there in 7.5 x 1023 molecules of H2SO4? **122 grams**

6) How many molecules are there in 122 grams of Cu(NO­3)2? **3.92 x 1023 molecules**

7) How many grams are there in 9.4 x 1025 molecules of H2? **312 grams**

8) How many molecules are there in 230 grams of CoCl2? **1.07 x 1024 molecules**

9) How many molecules are there in 2.3 grams of NH4SO2? **1.69 x 1022 molecules**

10) How many grams are there in 3.3 x 1023 molecules of N2I6? **430 grams**

11) How many molecules are there in 200 grams of CCl4? **7.82 x 1023 molecules**

12) How many grams are there in 1 x 1024 molecules of BCl3? **195 grams**

13) How many grams are there in 4.5 x 1022 molecules of Ba(NO­2)2? **17.1 grams**

14) How many molecules are there in 9.34 grams of LiCl? **1.33 x 1023 molecules**

15) How many grams do 4.3 x 1021 molecules of UF6 weigh? **2.51 grams**

16) How many molecules are there in 230 grams of NH4OH? **3.96 x 1024 molecules**