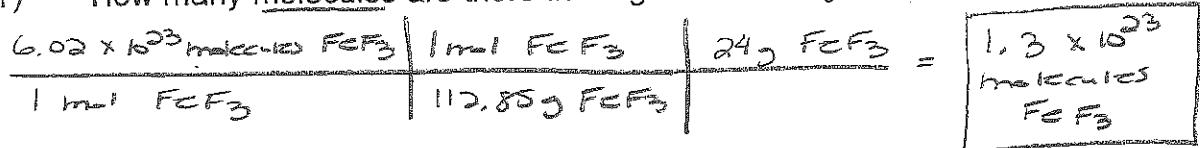
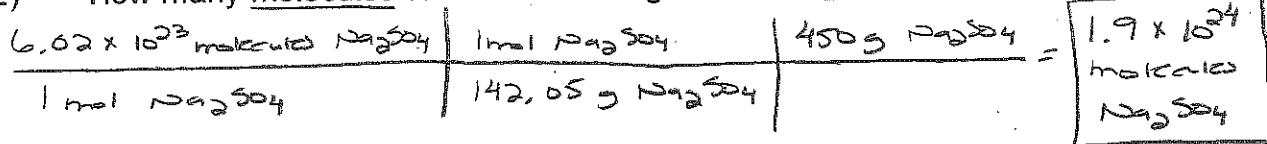


Moles, Molecules, and Grams Worksheet

1) How many molecules are there in 24 grams of FeF_3 ?



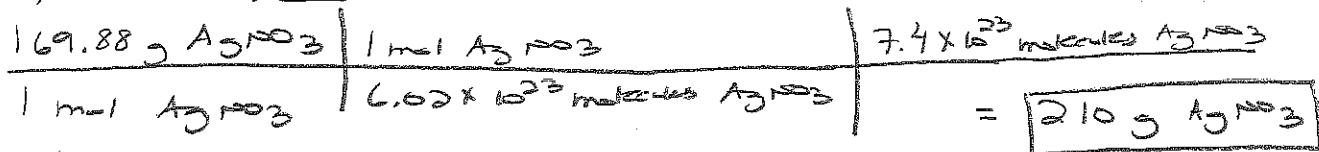
2) How many molecules are there in 450 grams of Na_2SO_4 ?



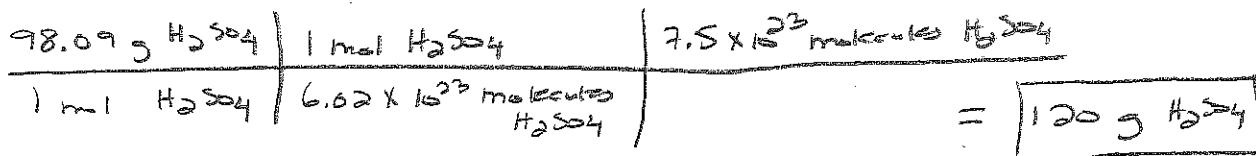
3) How many grams are there in 2.3×10^{24} atoms of silver?



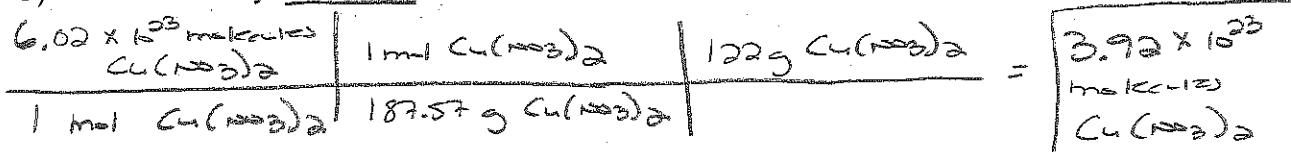
4) How many grams are there in 7.4×10^{23} molecules of AgNO_3 ?



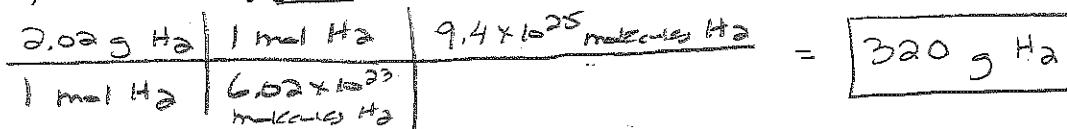
5) How many grams are there in 7.5×10^{23} molecules of H_2SO_4 ?



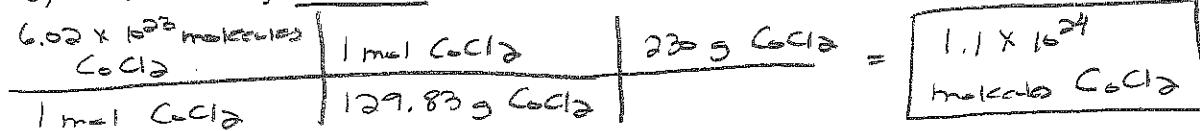
6) How many molecules are there in 122 grams of $\text{Cu}(\text{NO}_3)_2$?



7) How many grams are there in 9.4×10^{25} molecules of H_2 ?



8) How many molecules are there in 230 grams of CoCl_2 ?



9) How many molecules are there in 2.3 grams of NH_4SO_4 ?

6.02×10^{23} molecules NH_4SO_4	$1 \text{ mol } \text{NH}_4\text{SO}_4$	$2.3 \text{ g } \text{NH}_4\text{SO}_4$
$1 \text{ mol } \text{NH}_4\text{SO}_4$	$82.12 \text{ g } \text{NH}_4\text{SO}_4$	$= 1.7 \times 10^{22}$ molecules NH_4SO_4

10) How many grams are there in 3.3×10^{23} molecules of NaI_6 ?

$793.41 \text{ g } \text{NaI}_6$	$1 \text{ mol } \text{NaI}_6$	3.3×10^{23} molecules NaI_6
$1 \text{ mol } \text{NaI}_6$	6.02×10^{23} molecules NaI_6	$= 430 \text{ g } \text{NaI}_6$

11) How many molecules are there in 200 grams of CCl_4 ?

6.02×10^{23} molecules CCl_4	$1 \text{ mol } \text{CCl}_4$	$200 \text{ g } \text{CCl}_4$
$1 \text{ mol } \text{CCl}_4$	$153.81 \text{ g } \text{CCl}_4$	$= 8 \times 10^{23}$ molecules CCl_4

12) How many grams are there in 1×10^{24} molecules of BCl_3 ?

$117.16 \text{ g } \text{BCl}_3$	$1 \text{ mol } \text{BCl}_3$	1×10^{24} molecules BCl_3
$1 \text{ mol } \text{BCl}_3$	6.02×10^{23} molecules BCl_3	$= 200 \text{ g } \text{BCl}_3$

13) How many grams are there in 4.5×10^{22} molecules of $\text{Ba}(\text{NO}_3)_2$?

$229.35 \text{ g } \text{Ba}(\text{NO}_3)_2$	$1 \text{ mol } \text{Ba}(\text{NO}_3)_2$	4.5×10^{22} molecules $\text{Ba}(\text{NO}_3)_2$
$1 \text{ mol } \text{Ba}(\text{NO}_3)_2$	6.02×10^{23} molecules $\text{Ba}(\text{NO}_3)_2$	$= 17 \text{ g } \text{Ba}(\text{NO}_3)_2$

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

6.02×10^{23} molecules LiCl	$1 \text{ mol } \text{LiCl}$	$9.34 \text{ g } \text{LiCl}$
$1 \text{ mol } \text{LiCl}$	$42.39 \text{ g } \text{LiCl}$	$= 1.33 \times 10^{23}$ molecules LiCl

15) How many grams do 4.3×10^{21} molecules of UF_6 weigh?

$352.63 \text{ g } \text{UF}_6$	$1 \text{ mol } \text{UF}_6$	4.3×10^{21} molecules UF_6
$1 \text{ mol } \text{UF}_6$	6.02×10^{23} molecules UF_6	$= 2.5 \text{ g } \text{UF}_6$

16) How many molecules are there in 230 grams of NH_4OH ?

6.02×10^{23} molecules NH_4OH	$1 \text{ mol } \text{NH}_4\text{OH}$	$230 \text{ g } \text{NH}_4\text{OH}$
$1 \text{ mol } \text{NH}_4\text{OH}$	$35.06 \text{ g } \text{NH}_4\text{OH}$	$= 3.9 \times 10^{24}$ molecules NH_4OH