

Name \_\_\_\_\_ Date \_\_\_\_\_ Per \_\_\_\_\_

## **Moles, Molecules and Grams Worksheet-JQ**

Write out your work on another piece of paper. You need to show your work for credit. Be sure to add units to your answer.

- 1) How many molecules are there in 24 grams of  $\text{FeF}_3$ ?
- 2) How many molecules are there in 450 grams of  $\text{Na}_2\text{SO}_4$ ?
- 3) How many grams are there in  $2.3 \times 10^{24}$  atoms of silver?
- 4) How many grams are there in  $7.4 \times 10^{23}$  molecules of  $\text{AgNO}_3$ ?
- 5) How many grams are there in  $7.5 \times 10^{23}$  molecules of  $\text{H}_2\text{SO}_4$ ?
- 6) How many molecules are there in 122 grams of  $\text{Cu}(\text{NO}_3)_2$ ?
- 7) How many grams are there in  $9.4 \times 10^{25}$  molecules of  $\text{H}_2$ ?
- 8) How many atoms are there in 230 grams of  $\text{CoCl}_2$ ?
- 9) How many molecules are there in 2.3 grams of  $\text{NH}_4\text{SO}_2$ ?
- 10) How many grams are there in  $3.3 \times 10^{23}$  molecules of  $\text{N}_2\text{I}_6$ ?
- 11) How many molecules are there in 200 grams of  $\text{CCl}_4$ ?
- 12) How many grams are there in  $1 \times 10^{24}$  molecules of  $\text{BCl}_3$ ?
- 13) How many grams are there in  $4.5 \times 10^{22}$  molecules of  $\text{Ba}(\text{NO}_2)_2$ ?
- 14) How many molecules are there in 9.34 grams of  $\text{LiCl}$ ?
- 15) How many grams do  $4.3 \times 10^{21}$  molecules of  $\text{UF}_6$  weigh?
- 16) How many molecules are there in 230 grams of  $\text{NH}_4\text{OH}$ ?

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Determine how many atoms or molecules are in each of the following substances...

17) 0.30 mol F

18) 0.70 mol iron

19) 4.0 mol Na

20) 4.0 mol NH<sub>3</sub>

Determine the number of moles in each of the following substances...

21)  $8.0 \times 10^{13}$  atoms Ag

22)  $5.7 \times 10^{25}$  atoms potassium

23)  $3.5 \times 10^{23}$  molecules of water

24)  $1.86 \times 10^{25}$  molecules of methane

Mole Calculations from Everett Community College Tutoring Center Student Support Services Program

25) How many moles are in 40.0 grams of water?

26) How many grams are in 3.7 moles of Na<sub>2</sub>O?

27) How many atoms are in 14 moles of cadmium?

28) How many moles are in  $4.3 \times 10^{22}$  molecules of H<sub>3</sub>PO<sub>4</sub>?

29) How many molecules are in 48.0 grams of NaOH?

30) How many grams are in  $4.63 \times 10^{24}$  molecules of CCl<sub>4</sub>?