

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

## Mole Calculation Worksheet

- 1) How many moles are in 15 grams of lithium?
- 2) How many grams are in 2.4 moles of sulfur?
- 3) How many moles are in 22 grams of argon?
- 4) How many grams are in 88.1 moles of magnesium?
- 5) How many moles are in 2.3 grams of phosphorus?
- 6) How many grams are in 11.9 moles of chromium?
- 7) How many moles are in 9.8 grams of calcium?
- 8) How many grams are in 238 moles of arsenic?

*What are the molecular weights of the following compounds?*

- |                       |   |
|-----------------------|---|
| 9) NaOH               | 12) H <sub>3</sub> PO <sub>4</sub>                  |
| 10) H <sub>2</sub> O  | 13) Mn <sub>2</sub> Se <sub>7</sub>                 |
| 11) MgCl <sub>2</sub> | 14) (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> |

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- 15) How many grams are in 4.5 moles of sodium fluoride, NaF?
- 16) How many moles are in 98.3 grams of aluminum hydroxide, Al(OH)<sub>3</sub>?
- 17) How many grams are in 0.020 moles of beryllium iodide, BeI<sub>2</sub>?
- 18) How many moles are in 68 grams of copper (II) hydroxide, Cu(OH)<sub>2</sub>?
- 19) How many grams are in 3.3 moles of potassium sulfide, K<sub>2</sub>S?
- 20) How many moles are in  $1.2 \times 10^3$  grams of ammonia, NH<sub>3</sub>?
- 21) How many grams are in  $2.3 \times 10^{-4}$  moles of calcium phosphate, Ca<sub>3</sub>(PO<sub>3</sub>)<sub>2</sub>?
- 22) How many moles are in  $3.4 \times 10^{-7}$  grams of silicon dioxide, SiO<sub>2</sub>?
- 23) How many grams are in 1.11 moles of manganese sulfate, Mn<sub>3</sub>(SO<sub>4</sub>)<sub>7</sub>?

## Mole Calculation Worksheet – Answer Key

- 1) How many moles are in 15 grams of lithium? **2.2 moles**
- 2) How many grams are in 2.4 moles of sulfur? **77 grams**
- 3) How many moles are in 22 grams of argon? **0.55 moles**
- 4) How many grams are in 88.1 moles of magnesium? **2140 grams**
- 5) How many moles are in 2.3 grams of phosphorus? **0.074 moles**
- 6) How many grams are in 11.9 moles of chromium? **619 grams**
- 7) How many moles are in 9.8 grams of calcium? **0.24 moles**
- 8) How many grams are in 238 moles of arsenic? **17,800 grams**

*What are the molecular weights of the following compounds?*

- 9) NaOH **40.1 AMU**
- 10) H<sub>2</sub>O **18.0 AMU**
- 11) MgCl<sub>2</sub> **95.3 AMU**
- 12) H<sub>3</sub>PO<sub>4</sub> **98.0 AMU**
- 13) Mn<sub>2</sub>Se<sub>7</sub> **663.0 AMU**
- 14) (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> **132.1 AMU**
- 15) How many grams are in 4.5 moles of sodium fluoride, NaF? **189 grams**
- 16) How many moles are in 98.3 grams of aluminum hydroxide, Al(OH)<sub>3</sub>?  
**1.26 moles**
- 17) How many grams are in 0.02 moles of beryllium iodide, BeI<sub>2</sub>? **5.2 grams**
- 18) How many moles are in 68 grams of copper (II) hydroxide, Cu(OH)<sub>2</sub>?  
**0.70 moles**
- 19) How many grams are in 3.3 moles of potassium sulfide, K<sub>2</sub>S? **364.0 grams**
- 20) How many moles are in 1.2 x 10<sup>3</sup> grams of ammonia, NH<sub>3</sub>? **70.6 moles**
- 21) How many grams are in 2.3 x 10<sup>-4</sup> moles of calcium phosphate, Ca<sub>3</sub>(PO<sub>3</sub>)<sub>2</sub>?  
**0.064 grams**
- 22) How many moles are in 3.4 x 10<sup>-7</sup> grams of silicon dioxide, SiO<sub>2</sub>?  
**5.7 x 10<sup>-9</sup> moles**
- 23) How many grams are in 1.11 moles of manganese sulfate, Mn<sub>3</sub>(SO<sub>4</sub>)<sub>7</sub>?  
**930. grams**