

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 ₃ PO ₄ |
| 10) H ₂ O | 13) Mn ₂ Se ₇ |
| 11) MgCl ₂ | 14) (NH ₄) ₂ SO ₄ |

- 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)₃?
- 17) How many grams are in 0.02 moles of beryllium iodide, BeI₂?
- 18) How many moles are in 68 grams of copper (II) hydroxide, Cu(OH)₂?
- 19) How many grams are in 3.3 moles of potassium sulfide, K₂S?
- 20) How many moles are in 1.2×10^3 grams of ammonia, NH₃?
- 21) How many grams are in 2.3×10^{-4} moles of calcium phosphate, Ca₃(PO₃)₂?
- 22) How many moles are in 3.4×10^{-7} grams of silicon dioxide, SiO₂?
- 23) How many grams are in 1.11 moles of manganese sulfate, Mn₃(SO₄)₇?

Mole Calculation Worksheet – Answer Key

- 1) How many moles are in 15 grams of lithium? **0.46 moles**
- 2) How many grams are in 2.4 moles of sulfur? **77.0 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? **2141 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? **618.8 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? **17,826 grams**

What are the molecular weights of the following compounds?

- 9) NaOH **40.1 grams**
- 10) H₂O **18.0 grams**
- 11) MgCl₂ **95.3 grams**
- 12) H₃PO₄ **98.0 grams**
- 13) Mn₂Se₇ **663.0 grams**
- 14) (NH₄)₂SO₄ **132.1 grams**
- 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)₃?
1.26 moles
- 17) How many grams are in 0.02 moles of beryllium iodide, BeI₂? **5.2 grams**
- 18) How many moles are in 68 grams of copper (II) hydroxide, Cu(OH)₂?
0.70 moles
- 19) How many grams are in 3.3 moles of potassium sulfide, K₂S? **364.0 grams**
- 20) How many moles are in 1.2 x 10³ grams of ammonia, NH₃? **70.6 moles**
- 21) How many grams are in 2.3 x 10⁻⁴ moles of calcium phosphate, Ca₃(PO₃)₂?
0.064 grams
- 22) How many moles are in 3.4 x 10⁻⁷ grams of silicon dioxide, SiO₂?
5.66 x 10⁻⁹ moles
- 23) How many grams are in 1.11 moles of manganese sulfate, Mn₃(SO₄)₇?
929.5 grams