

## 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?
9. How many grams are in 4.5 moles of sodium fluoride?
10. How many moles are in 98.3 grams of aluminum hydroxide?
11. How many grams are in 0.02 moles of beryllium iodide?
12. How many moles are in 68 grams of copper (II) hydroxide?
13. How many grams are in 3.3 moles of potassium sulfide?
14. How many moles are in  $1.2 \times 10^3$  grams of ammonia?
15. How many grams are in  $2.3 \times 10^{-4}$  moles of calcium phosphate?
16. How many moles are in  $3.4 \times 10^{-7}$  grams of silicon dioxide?
17. How many grams are in 1.11 moles of manganese (II) sulfate?

**Convert grams to moles:**

1. 132.4 g calcium

3. 4177g  $\text{AlCl}_3$

2. 890.0g  $\text{HCl}$

4. 58.1g oxygen

**Convert moles to grams:**

5. 10.000 mol silver

7. 8.000 mol chlorine

6. 4.100 mol  $\text{ZnO}$

8. 1.5 mol  $\text{H}_2\text{SO}_4$

**Convert atoms or molecules to moles:**

9.  $7.80 \times 10^{23}$  molecules fluorine

11.  $5.00 \times 10^{26}$  molecules  $\text{NH}_3$

10.  $1.2 \times 10^{23}$  molecules  $\text{CO}_2$

12. 20,000 atoms boron

**Convert moles to atoms or molecules:**

13. 3.30 mol dihydrogen monoxide

15. 0.0020 mol sodium

14. 16.2 mol  $\text{CO}$

16. 10.0 mol  $\text{H}_2\text{O}_2$

**Two-step conversions:**

17. 26.8g  $\text{HBr}$  to molecules

18.  $5.00 \times 10^{23}$  molecules  $\text{LiOH}$  to g

19. 67.0g  $\text{KCl}$  to molecules

20.  $6.3 \times 10^{25}$  atoms carbon to g