

THE MOLE AND AVOGADRO'S NUMBER

Name _____

One mole of a substance contains Avogadro's Number (6.02×10^{23}) of molecules.

How many molecules are in the quantities below?

1. 2.0 moles

2. 1.5 moles

3. 0.75 mole

4. 15 moles

5. 0.35 mole

How many moles are in the number of molecules below?

1. 6.02×10^{23}

2. 1.204×10^{24}

3. 1.5×10^{20}

4. 3.4×10^{26}

5. 7.5×10^{19}

MOLAR MASS

Name _____

Determine the gram formula mass (the mass of one mole) of each compound below.

1. KMnO_4 _____

2. KCl _____

3. Na_2SO_4 _____

4. $\text{Ca}(\text{NO}_3)_2$ _____

5. $\text{Al}_2(\text{SO}_4)_3$ _____

6. $(\text{NH}_4)_3\text{PO}_4$ _____

7. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ _____

8. $\text{Mg}_3(\text{PO}_4)_2$ _____

9. $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$ _____

10. $\text{Zn}_3(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$ _____

11. H_2CO_3 _____

12. $\text{Hg}_2\text{Cr}_2\text{O}_7$ _____

13. $\text{Ba}(\text{ClO}_3)_2$ _____

14. $\text{Fe}_2(\text{SO}_3)_3$ _____

15. $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ _____