

Counting Atoms Worksheet

Section 1: Simple Binary Compounds

- How many oxygen atoms are in MgO (Magnesium Oxide)?
- Count the hydrogen and chlorine atoms in HCl (Hydrochloric Acid).
- What is the total number of atoms in LiF (Lithium Fluoride)?

Section 2: Organic Compounds

- How many carbon atoms are in methane (CH₄)?
- Count the atoms in ethane (C₂H₆).
- What is the total number of atoms in ethanol (C₂H₅OH)?

Section 3: Complex Molecules

- How many atoms are in glucose (C₆H₁₂O₆)?
- Count the atoms in ascorbic acid (Vitamin C, C₆H₈O₆).
- What is the total number of atoms in caffeine (C₈H₁₀N₄O₂)?

Section 4: Reaction Products

- If you react magnesium with oxygen to form magnesium oxide ($2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$), how many atoms are in the product?
- Count the atoms produced when hydrogen reacts with nitrogen to form ammonia ($3\text{H}_2 + \text{N}_2 \rightarrow 2\text{NH}_3$).