

Learnzy Academy

Worksheet: Atoms AND Molecules

1. What name is given to the number 6.023×10^{23} ?
2. How many atoms are there in exactly 12 g of carbon?
3. A 0.24 g sample of a compound of oxygen and boron was found by analysis to contain 0.096 g of boron and 0.144 g of oxygen. Calculate the percentage composition of the compound by weight.
4. Give Latin names for sodium & mercury.
5. Calculate formula unit mass of CaCl_2 .
6. What is the atomicity of Argon?
7. How many atoms are present in H_2SO_4 ?
8. 'Atoms of most elements are not able to exist independently.' Name two atoms which exist as independent atoms.
9. What are polyatomic ions? Give two examples.
10. What term is used to represent the mass of 1 mole molecules of a substance?
11. Define law of conservation of mass.
12. Name a diatomic gas.
13. Name the element which is used as the reference for atomic mass.
14. Give the names of the elements present in the following compounds: (a) Quick lime (b) Hydrogen bromide (c) Baking powder (d) Potassium sulphate
15. Who gave law of conservation of mass?
16. When 3.0 g of carbon is burnt in 8.00 g of oxygen, 11.00 g of carbon dioxide is produced. What mass of carbon dioxide will be formed when 3.00 g of carbon is burnt in 50.00 g of oxygen? Which law of chemical combination will govern your answer?
17. What is molecular mass?
18. Write the chemical formulae of the following: (a) Magnesium chloride (b) Calcium oxide (c) Copper nitrate (d) Aluminium chloride (e) Calcium carbonate
19. Calculate the molar mass of the following substances: (a) Ethyne, C_2H_2 (b) Sulphur molecule, S_8 (c) Phosphorus molecule, P_4 (Atomic mass of phosphorus = 31) (d) Hydrochloric acid, HCl (e) Nitric acid, HNO_3
20. Name the scientist who laid the foundation of chemical sciences. How?