

Chemistry Practice Problems - Chemical Formulas

1. What is the chemical formula for water?

- A) H_2O
- B) CO_2
- C) H_2O_2
- D) O_2

2. Which of the following is the chemical formula for table salt?

- A) NaCl
- B) KCl
- C) MgCl_2
- D) NaOH

3. What is the chemical formula for carbon dioxide?

- A) CO
- B) CO_2
- C) C_2O
- D) H_2CO_3

4. Which of these is the correct formula for glucose?

- A) $\text{C}_6\text{H}_{12}\text{O}_6$
- B) $\text{C}_{12}\text{H}_{22}\text{O}_{11}$
- C) CH_3OH
- D) $\text{C}_2\text{H}_5\text{OH}$

5. What is the formula for ammonia?

- A) NH_3
- B) NH_4Cl
- C) NO_2
- D) N_2H_4

6. Which chemical formula represents sulfuric acid?

- A) H_2SO_4
- B) H_2S
- C) SO_2
- D) HCl

7. What is the chemical formula for methane?

- A) CH_4
- B) C_2H_6
- C) C_3H_8
- D) CH_3OH

8. Identify the chemical formula for baking soda.

- A) NaHCO_3
- B) Na_2CO_3
- C) NaOH
- D) NaCl

9. Which of these is the formula for acetic acid?

- A) CH_3COOH
- B) H_2CO_3
- C) $\text{C}_2\text{H}_5\text{OH}$
- D) HCOOH

10. What is the chemical formula for hydrochloric acid?

- A) HCl
- B) HF
- C) HBr
- D) HI

Answer Key

1. The chemical formula for water is H_2O .

This represents two hydrogen atoms and one oxygen atom combined to form water.

2. The chemical formula for table salt is NaCl .

Sodium (Na) and chlorine (Cl) combine in a 1:1 ratio to form sodium chloride, commonly known as table salt.

3. The chemical formula for carbon dioxide is CO_2 .

One carbon atom combined with two oxygen atoms forms carbon dioxide.

4. The correct formula for glucose is $\text{C}_6\text{H}_{12}\text{O}_6$.

Glucose is a simple sugar composed of six carbon, twelve hydrogen, and six oxygen atoms.

5. The formula for ammonia is NH_3 .

Ammonia consists of one nitrogen atom bonded to three hydrogen atoms.

6. The chemical formula for sulfuric acid is H_2SO_4 .

This formula represents two hydrogen atoms, one sulfur atom, and four oxygen atoms.

7. The chemical formula for methane is CH_4 .

Methane consists of one carbon atom bonded to four hydrogen atoms.

8. The chemical formula for baking soda is NaHCO_3 .

Sodium bicarbonate, commonly known as baking soda, includes sodium, hydrogen, carbon, and oxygen.

9. The formula for acetic acid is CH_3COOH .

Acetic acid, the main component of vinegar, consists of two carbon, four hydrogen, and two oxygen atoms.

10. The chemical formula for hydrochloric acid is HCl .

Hydrochloric acid consists of hydrogen and chlorine.