

# NUMBER OF ATOMS IN A FORMULA

Name \_\_\_\_\_

Determine the number of atoms in the following chemical formulas.

- |                                                    |                                |                                                                    |       |
|----------------------------------------------------|--------------------------------|--------------------------------------------------------------------|-------|
| 1. NaCl                                            | <u>Na = 1</u><br><u>Cl = 1</u> | 11. Cu(NO <sub>3</sub> ) <sub>2</sub>                              | _____ |
| 2. H <sub>2</sub> SO <sub>4</sub>                  | _____                          | 12. KMnO <sub>4</sub>                                              | _____ |
| 3. KNO <sub>3</sub>                                | _____                          | 13. H <sub>2</sub> O <sub>2</sub>                                  | _____ |
| 4. CaCl <sub>2</sub>                               | _____                          | 14. H <sub>3</sub> PO <sub>4</sub>                                 | _____ |
| 5. C <sub>2</sub> H <sub>6</sub>                   | _____                          | 15. (NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub>                | _____ |
| 6. Ba(OH) <sub>2</sub>                             | _____                          | 16. Fe <sub>2</sub> O <sub>3</sub>                                 | _____ |
| 7. NH <sub>4</sub> Br                              | _____                          | 17. NaC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>                 | _____ |
| 8. Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> | _____                          | 18. Mg(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> | _____ |
| 9. Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> | _____                          | 19. Hg <sub>2</sub> Cl <sub>2</sub>                                | _____ |
| 10. Mg(NO <sub>3</sub> ) <sub>2</sub>              | _____                          | 20. K <sub>2</sub> SO <sub>3</sub>                                 | _____ |

NAME: \_\_\_\_\_

BLOCK: \_\_\_\_\_

DATE: \_\_\_\_\_

## CHEMISTRY: COUNTING ATOMS IN COMPOUNDS WORKSHEET #7.0.1

INSTRUCTIONS: Write the quantity of atoms of each element opposite the formula of the compound for the quantity of formula units and molecules shown:

For example:  $5\text{P}_2\text{O}_3$        $\text{P} = (5 \times 2 =) 10$        $\text{O} = (5 \times 3 =) 15$

For example:  $4\text{Zn}(\text{NO}_3)_2$        $\text{Zn} = (4 \times 1 =) 4$        $\text{N} = (4 \times 1 \times 2 =) 8$        $\text{O} = (4 \times 3 \times 2 =) 24$

1.  $4\text{K}_2\text{CO}_3$        $\text{K} = \underline{\hspace{1cm}}$        $\text{C} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
2.  $2\text{Sr}_3(\text{PO}_4)_2$        $\text{Sr} = \underline{\hspace{1cm}}$        $\text{P} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
3.  $3\text{N}_4\text{O}_{10}$        $\text{N} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
4.  $2(\text{NH}_4)_3\text{N}$        $\text{N} = \underline{\hspace{1cm}}$        $\text{H} = \underline{\hspace{1cm}}$
5.  $8\text{Cl}_2\text{O}$        $\text{Cl} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
6.  $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$        $\text{Ca} = \underline{\hspace{1cm}}$        $\text{C} = \underline{\hspace{1cm}}$        $\text{H} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
7.  $12\text{NaBr}$        $\text{Na} = \underline{\hspace{1cm}}$        $\text{Br} = \underline{\hspace{1cm}}$
8.  $4\text{Al}(\text{OH})_3$        $\text{Al} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$        $\text{H} = \underline{\hspace{1cm}}$
9.  $3\text{NaHCO}_3$        $\text{Na} = \underline{\hspace{1cm}}$        $\text{H} = \underline{\hspace{1cm}}$        $\text{C} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
10.  $5\text{Ga}_2(\text{Cr}_2\text{O}_7)_3$        $\text{Ga} = \underline{\hspace{1cm}}$        $\text{Cr} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
11.  $7\text{C}_2\text{S}_2$        $\text{C} = \underline{\hspace{1cm}}$        $\text{S} = \underline{\hspace{1cm}}$
12.  $4\text{Fe}_2\text{O}_3$        $\text{Fe} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
13.  $6\text{Ba}(\text{MnO}_4)_2$        $\text{Ba} = \underline{\hspace{1cm}}$        $\text{Mn} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
14.  $3\text{V}_2\text{O}_5$        $\text{V} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
15.  $2\text{KNO}_3$        $\text{K} = \underline{\hspace{1cm}}$        $\text{N} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
16.  $9\text{MgSO}_4$        $\text{Mg} = \underline{\hspace{1cm}}$        $\text{S} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
17.  $5\text{Al}_2(\text{SiO}_3)_2$        $\text{Al} = \underline{\hspace{1cm}}$        $\text{Si} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$
18.  $4\text{Au}(\text{IO}_3)_3$        $\text{Au} = \underline{\hspace{1cm}}$        $\text{I} = \underline{\hspace{1cm}}$        $\text{O} = \underline{\hspace{1cm}}$

(Continued)