

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. 12NaBr $\text{Na} = \underline{\hspace{1cm}}$ $\text{Br} = \underline{\hspace{1cm}}$
8. $4\text{Al}(\text{OH})_3$ $\text{Al} = \underline{\hspace{1cm}}$ $\text{O} = \underline{\hspace{1cm}}$ $\text{H} = \underline{\hspace{1cm}}$
9. 3NaHCO_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. 2KNO_3 $\text{K} = \underline{\hspace{1cm}}$ $\text{N} = \underline{\hspace{1cm}}$ $\text{O} = \underline{\hspace{1cm}}$
16. 9MgSO_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)

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

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

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|-----|--|--|--|--|---------------------------------------|
| 19. | 8SnCl_4 | $\text{Sn} = \underline{\hspace{1cm}}$ | $\text{Cl} = \underline{\hspace{1cm}}$ | | |
| 20. | $6\text{Cu}_2\text{SeO}_4$ | $\text{Cu} = \underline{\hspace{1cm}}$ | $\text{Se} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 21. | 3AsBr_3 | $\text{As} = \underline{\hspace{1cm}}$ | $\text{Br} = \underline{\hspace{1cm}}$ | | |
| 22. | $2\text{H}_2\text{SO}_4$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{S} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 23. | SBr_2 | $\text{S} = \underline{\hspace{1cm}}$ | $\text{Br} = \underline{\hspace{1cm}}$ | | |
| 24. | $4\text{Ca}(\text{OH})_2$ | $\text{Ca} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | $\text{H} = \underline{\hspace{1cm}}$ | |
| 25. | $5\text{Mg}_3(\text{PO}_4)_2$ | $\text{Mg} = \underline{\hspace{1cm}}$ | $\text{P} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 26. | $12\text{H}_2\text{O}$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | | |
| 27. | $5\text{N}_2\text{O}_4$ | $\text{N} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | | |
| 28. | 3ClF | $\text{Cl} = \underline{\hspace{1cm}}$ | $\text{F} = \underline{\hspace{1cm}}$ | | |
| 29. | $7\text{P}_2\text{O}_5$ | $\text{P} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | | |
| 30. | 2KrCl_6 | $\text{Kr} = \underline{\hspace{1cm}}$ | $\text{Cl} = \underline{\hspace{1cm}}$ | | |
| 31. | $5\text{Al}(\text{C}_2\text{H}_3\text{O}_2)_2$ | $\text{Al} = \underline{\hspace{1cm}}$ | $\text{C} = \underline{\hspace{1cm}}$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ |
| 32. | $3(\text{NH}_4)_2\text{Cr}_2\text{O}_7$ | $\text{N} = \underline{\hspace{1cm}}$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{Cr} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ |
| 33. | $5\text{Fe}_3(\text{PO}_4)_2$ | $\text{Fe} = \underline{\hspace{1cm}}$ | $\text{P} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 34. | $2\text{NH}_4\text{NO}_3$ | $\text{N} = \underline{\hspace{1cm}}$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 35. | $5\text{BaC}_4\text{H}_4\text{O}_6$ | $\text{Ba} = \underline{\hspace{1cm}}$ | $\text{C} = \underline{\hspace{1cm}}$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ |
| 36. | $4\text{Cu}(\text{HSO}_3)_2$ | $\text{Cu} = \underline{\hspace{1cm}}$ | $\text{H} = \underline{\hspace{1cm}}$ | $\text{S} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ |
| 37. | $9\text{Au}(\text{NO}_2)_2$ | $\text{Au} = \underline{\hspace{1cm}}$ | $\text{N} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 38. | $3\text{K}_2\text{ZnO}_2$ | $\text{K} = \underline{\hspace{1cm}}$ | $\text{Zn} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 39. | $3\text{Sr}(\text{MnO}_4)_2$ | $\text{Sr} = \underline{\hspace{1cm}}$ | $\text{Mn} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |
| 40. | $4\text{Al}_2(\text{CO}_3)_3$ | $\text{Al} = \underline{\hspace{1cm}}$ | $\text{C} = \underline{\hspace{1cm}}$ | $\text{O} = \underline{\hspace{1cm}}$ | |