

WORKSHEET – ASSIGNING OXIDATION NUMBERS

Name _____

Period _____

Oxidation Number Rules:

1. A pure element has an oxidation number of 0.
2. The oxidation number of an element in a monatomic ion equals the charge of the ion.
3. The sum of the oxidation number of all the elements in a compound equals 0.
4. The sum of the oxidation numbers of all the elements in a polyatomic ion equals the charge on the ion.

Directions: In the following questions, give the oxidation number of the indicated atoms/ion.

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|---------------------------------------|---------------------------------------|
| 1. N in N_2O_3 | 16. C in CH_4 |
| 2. S in H_2SO_4 | 17. Mn in MnO_2 |
| 3. C | 18. S in SO_3^{2-} |
| 4. C in CO | 19. Mg^{2+} |
| 5. Na in NaCl | 20. Cl^- |
| 6. H in H_2O | 21. O_2 |
| 7. Ba in BaCl_2 | 22. P_4 |
| 8. N in NO_2^- | 23. Na in Na_2S |
| 9. S in Al_2S_3 | 24. S in H_2S |
| 10. S in HSO_4^- | 25. Ca^{2+} |
| 11. Cl in $\text{Fe}(\text{ClO}_2)_3$ | 26. H in OH^- |
| 12. Fe in $\text{Fe}(\text{ClO}_2)_3$ | 27. Mn in KMnO_4 |
| 13. N in NO_3^- | 28. Cl in $\text{Mg}(\text{ClO}_3)_2$ |
| 14. Cu^{2+} | 29. C in $\text{C}_2\text{O}_4^{2-}$ |
| 15. Zn^{2+} | |