

## ASSIGNING OXIDATION NUMBERS

Name \_\_\_\_\_

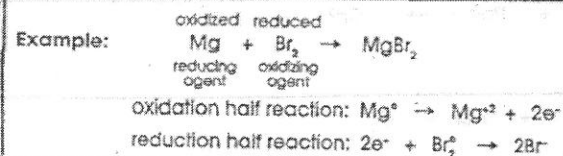
Assign oxidation numbers to all of the elements in each of the compounds or ions below.

|                                      |                                    |
|--------------------------------------|------------------------------------|
| 1. HCl                               | 11. H <sub>2</sub> SO <sub>3</sub> |
| 2. KNO <sub>3</sub>                  | 12. H <sub>2</sub> SO <sub>4</sub> |
| 3. OH <sup>-</sup>                   | 13. BaO <sub>2</sub>               |
| 4. Mg <sub>3</sub> N <sub>2</sub>    | 14. KMnO <sub>4</sub>              |
| 5. KClO <sub>3</sub>                 | 15. LiH                            |
| 6. Al(NO <sub>3</sub> ) <sub>3</sub> | 16. MnO <sub>2</sub>               |
| 7. S <sub>8</sub>                    | 17. OF <sub>2</sub>                |
| 8. H <sub>2</sub> O <sub>2</sub>     | 18. SO <sub>3</sub>                |
| 9. PbO <sub>2</sub>                  | 19. NH <sub>3</sub>                |
| 10. NaHSO <sub>4</sub>               | 20. Na                             |

## REDOX REACTIONS

Name \_\_\_\_\_

For the equations below, identify the substance oxidized, the substance reduced, the oxidizing agent, the reducing agent, and write the oxidation and reduction half reactions.



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| 1. 2H <sub>2</sub> + O <sub>2</sub> → 2H <sub>2</sub> O              |
| 2. Fe + Zn <sup>2+</sup> → Fe <sup>2+</sup> + Zn                     |
| 3. 2Al + 3Fe <sup>2+</sup> → 2Al <sup>3+</sup> + 3Fe                 |
| 4. Cu + 2AgNO <sub>3</sub> → Cu(NO <sub>3</sub> ) <sub>2</sub> + 2Ag |