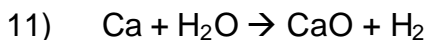


## Oxidation State Worksheet

*In each of the following chemicals, determine the oxidation states of each element:*

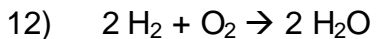
- 1) sodium nitrate \_\_\_\_\_
- 2) ammonia \_\_\_\_\_
- 3) zinc oxide \_\_\_\_\_
- 4) water \_\_\_\_\_
- 5) calcium hydride \_\_\_\_\_
- 6) carbon dioxide \_\_\_\_\_
- 7) nitrogen \_\_\_\_\_
- 8) sodium sulfate \_\_\_\_\_
- 9) aluminum hydroxide \_\_\_\_\_
- 10) magnesium phosphate \_\_\_\_\_

*In each of the following reactions, determine what was oxidized and what was reduced.*



Element oxidized: \_\_\_\_\_

Element reduced: \_\_\_\_\_



Element oxidized: \_\_\_\_\_

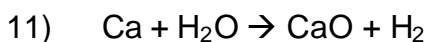
Element reduced: \_\_\_\_\_

## Oxidation State Worksheet – Solutions

*In each of the following chemicals, determine the oxidation states of each element:*

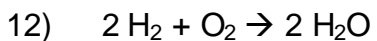
- 1) sodium nitrate: **Na, +1; N, +5; O, -2**
- 2) ammonia: **N, -3; H, +1**
- 3) zinc oxide: **Zn, +2; O, -2**
- 4) water: **H, +1; O, -2**
- 5) calcium hydride: **H, -1; Ca, +2**
- 6) carbon dioxide: **C, +4; O, -2**
- 7) nitrogen: **N, 0**
- 8) sodium sulfate: **Na, +1; S, +6; O, -2**
- 9) aluminum hydroxide: **Al, +3; H, +1; O, -2**
- 10) magnesium phosphate: **Mg, +2; P, +5; O, -2**

*In each of the following reactions, determine what was oxidized and what was reduced.*



Element oxidized: **calcium, from 0 to +2**

Element reduced: **hydrogen, from +1 to 0**



Element oxidized: **hydrogen, from 0 to +1**

Element reduced: **oxygen, from 0 to -2**