REDOX IN EQUATIONS

Determine what is oxidized and what is reduced in the following equations, using oxidation states. Complete the statements that follow each equation.

An example is provided for you below:

Example: **$Mg + O_2 \rightarrow MgO$**

Mg is ***oxidized*** because its oxidation state ***increased*** from **0** in **Mg** to **+2** in **MgO**.

O_2 is ***reduced*** because its oxidation state ***decreased*** from **0** in **O_2** to **-2** in **MgO**.

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1. **$3\ Ca + N_2 \rightarrow Ca_3N_2$**

_____is ***oxidized*** because its oxidation state ***increased*** from _____ in _____

to _____in _____.

_____is ***reduced*** because its oxidation state ***decreased*** from _____ in _____

to _____in _____.

2. **$4\ Fe + 3\ O_2 \rightarrow 2\ Fe_2O_3$**

_____is ***oxidized*** because its oxidation state ***increased*** from _____ in _____

to _____in _____.

_____is ***reduced*** because its oxidation state ***decreased*** from _____ in _____

to _____in _____.

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3. $Cl_2 + 2NaBr \rightarrow 2\ NaCl + Br_2$

_____is ***oxidized*** because its oxidation state ***increased*** from _____ in _____

to _____in _____.

_____is ***reduced*** because its oxidation state ***decreased*** from _____ in _____

to _____in _____.

4. $Si + 2\ Cl_2 \rightarrow SiCl_4$

_____is ***oxidized*** because its oxidation state ***increased*** from _____ in _____

to _____in _____.

_____is ***reduced*** because its oxidation state ***decreased*** from _____ in _____

to _____in _____.

5. $2\ Na + 2\ H_2O \rightarrow 2\ NaOH + H_2$

_____is ***oxidized*** because its oxidation state ***increased*** from _____ in _____

to _____in _____.

_____is ***reduced*** because its oxidation state ***decreased*** from _____ in _____

to _____in _____.

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