

Write out the word equations for these seven reactions, including phases, then indicate if they are **S**ynthesis or **D**ecomposition reactions in the last column.

#	write balanced chemical reaction or word equation	synth or decomp?
1	$2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$ magnesium _(s) + oxygen _(g) combine into magnesium oxide _(s)	S
2	$\text{Fe}_2\text{S}_3 \rightarrow 2\text{Fe} + 3\text{S}$ Iron III sulfide _(s) decomposes into iron _(s) and sulfur _(s)	D
3	$\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$ calcium oxide _(s) + water _(l) forms calcium hydroxide _(aq)	S
4	copper I sulfide powder decomposes into copper and sulfur $\text{Cu}_2\text{S}_{(s)} \rightarrow \text{Cu}_{(s)} + \text{S}_{(s)}$	D
5	beryllium combines with oxygen to form beryllium oxide $2\text{Be}_{(s)} + \text{O}_{2(g)} \rightarrow 2\text{BeO}_{(s)}$	S
6	magnesium reacts with nitrogen to form magnesium nitride $3\text{Mg}_{(s)} + \text{N}_{2(g)} \rightarrow \text{Mg}_3\text{N}_{2(s)}$	S
7	calcium carbonate breaks down to calcium oxide & carbon dioxide $\text{CaCO}_{3(s)} \rightarrow \text{CaO}_{(s)} + \text{CO}_{2(g)}$	D
8	$\text{N}_2 + \text{O}_2 \rightarrow 2\text{NO}$ nitrogen gas + oxygen gas form gaseous nitrogen monoxide	S