Reactions HW #1 - Synthesis and Decomposition Name: key

Write out the word equations or balanced chemical equations for these 7 reactions, including phases, then indicate if they are Synthesis or Decomposition reactions in the last column.

#	If there are symbols, write the word equation, if there are words, write the balanced chemical equation with phase symbols.	Is this reaction synthesis or decomposition? S or D
1	$2Mg + O_2 \rightarrow 2MgO$ magnesium and oxygen form magnesium oxide	S
2	$Fe_2S_3 \rightarrow 2Fe + 3S$ Iron III sulfide breaks down into Iron and Sulfur	D
3	$MgO + CO_2 \rightarrow MgCO_3$ Magnesium oxide and Carbon dioxide form magnesium carbonate	S
4	copper I sulfide powder breaks down into copper and sulfur Cu^{+1} S^{-2} $Cu_2S_{(s)} \longrightarrow 2Cu_{(s)} + S_{(s)}$	D
5	beryllium combines with oxygen to form beryllium oxide $2Be_{(s)} + O_{2(g)} \longrightarrow 2BeO_{(s)}$	S
6	calcium reacts with nitrogen to form calcium nitride $3Ca_{(s)} + N_{2(g)} \longrightarrow Ca_3N_{2(s)}$	S
7	Potassium chlorate breaks down to potassium chloride & oxygen $2KClO_{3(s)} \longrightarrow 2KCl_{(s)} + 3O_{2(g)}$	D
8	$N_{2(G)} + O_{2(G)} \rightarrow 2NO_{(G)}$ nitrogen and oxygen form nitrogen monoxide	S