

Example:

Predict the sign of ΔS_{system} for each of the following changes.

$2 \text{N}_2\text{O}_{(\text{g})} \rightarrow 2 \text{N}_{2(\text{g})} + \text{O}_{2(\text{g})}$	
$\text{Mg}_{(\text{s})} + \text{Cl}_{2(\text{g})} \rightarrow \text{MgCl}_{2(\text{s})}$	
$\text{HCl}_{(\text{g})} + \text{NH}_{3(\text{g})} \rightarrow \text{NH}_4\text{Cl}_{(\text{s})}$	
$2\text{O}_{3(\text{g})} \rightarrow 3\text{O}_{2(\text{g})}$	
$2\text{H}_2\text{S}_{(\text{g})} + 3\text{O}_{2(\text{g})} \rightarrow 2\text{H}_2\text{O}_{(\text{g})} + 2\text{SO}_{2(\text{g})}$	
$\text{C}_{10}\text{H}_{8(\text{l})} \rightarrow \text{C}_{10}\text{H}_{8(\text{s})}$	