

- Calculate ΔG° for the following reaction at 25 °C.



Data:

	$S^\circ / \text{J K}^{-1} \text{mol}^{-1}$	$\Delta_f H^\circ / \text{kJ mol}^{-1}$
$\text{SO}_3(\text{g})$	256.2	-395.2
$\text{NH}_3(\text{g})$	192.5	-46.19
$\text{NO}(\text{g})$	210.6	90.37
$\text{SO}_2(\text{g})$	248.5	-296.9
$\text{H}_2\text{O}(\text{g})$	188.7	-241.8

Marks**4**

Answer:

Is the reaction spontaneous? Give a reason for your answer.

At what temperature does the spontaneity change?

Answer: