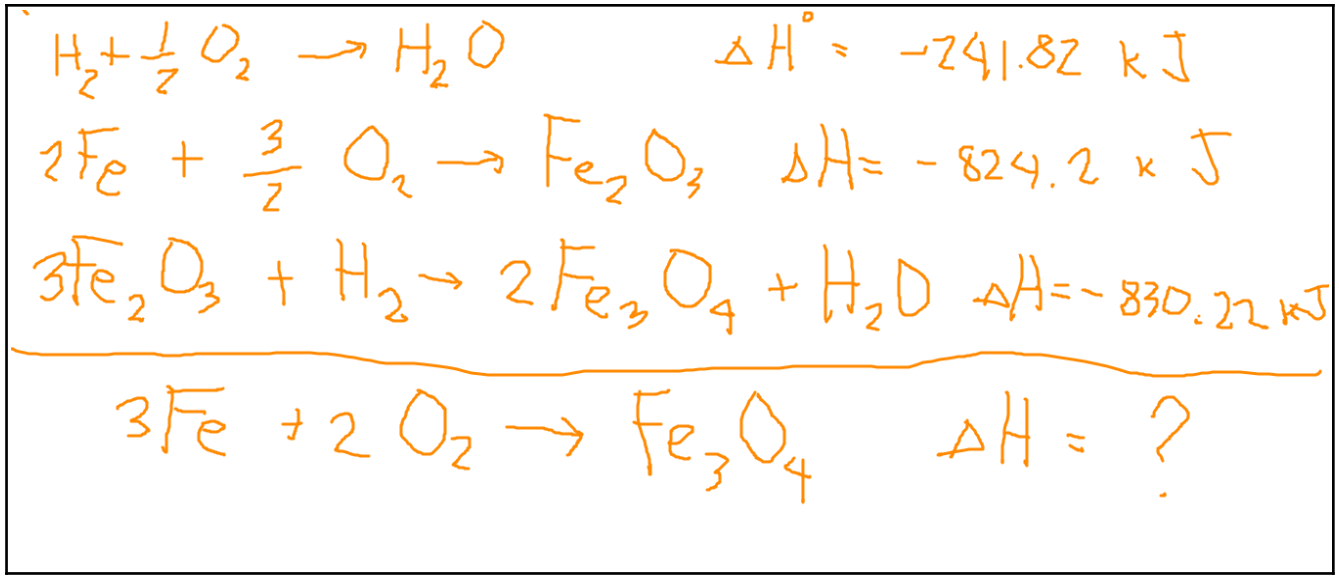
General Chemistry 2 | 3rd Quarter

WW6: Hess' Law

January 21 2021

Find ΔH.

Given:



- 1/2	~~(½)H_2O~~ → ~~(½)H_2~~ + (¼)O_2	ΔH = -241.82 kJ * - ½ = 120.91 kJ
3/2	3Fe + (9/4)O_2 → ~~(3/2)Fe_2O_3~~	ΔH = -824.2 kJ * 3/2 = -1236.3 kJ
1/2	~~(3/2)Fe_2O_3~~ + ~~(½)H_2~~ → Fe_3O_4 + ~~(½)H_2O~~	ΔH = -830.22kJ * ½ = -415.11 kJ
	3Fe + 2O_2 → Fe_3O_4	ΔH = -1530.5 kJ