Name		AP Chemistry
		response and multiple choice questions. One question will be graded. Show all work
Box and clea	rly label all final free res Substance Stand	ponse answers. lard Entropy Joule °C ⁻¹ mole ⁻¹
	$N_2(g)$	192
	$H_2(g)$	130
	NH ₃ (g)	192
	n be produced by the follow	
		$^{\circ}$ of NH ₃ (g) is -16.5 kilojoules per mole.
	the value for ΔH° for the re-	
		ed by raising the temperature? Explain. the reaction above at 298 K?
		at 25°C and 570 millimeters Hg were completely converted to ammonia and the ammonia
		ke 0.500 liter of solution, what would be the molarity of the resulting solution?

Compound	ΔH°_{f} (kilocalories/ mole)	S° (calories/mole K)
H ₂ O (l)	-68.3	16.7
$CO_2(g)$	-94.1	51.1
$O_2(g)$	0.0	49.0
$C_3H_8(g)$?	64.5

When 1.000 gram of propane gas, C_3H_8 , is burned at 25°C and 1.00 atmosphere, $H_2O(l)$ and $CO_2(g)$ are formed with the evolution of 50.33 kilojoules.

(a)	Write a	balanced	equation	for the	combustion	reaction.
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(b) Calculate the molar enthalpy of combustion, ΔH°_{comb} , of propane.

alculate	the the standard molar enthalpy of formation, ΔH°_{f} , of propane gas. The the entropy change, ΔS°_{comb} , for the combustion reaction and account of the sign of ΔS°_{comb} .	