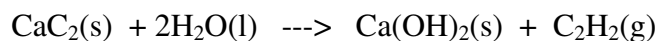


1. (14) Acetylene can be produced from calcium carbide according to the following reaction:



Use the tabulated values of ΔH_f° to determine ΔH° for the reaction at 25°C.

	ΔH_f°
CaC ₂ (s)	-59.8 kJ/mol
H ₂ O(l)	-285.83
Ca(OH) ₂ (s)	-986.09
C ₂ H ₂ (g)	226.73

2. (18) A sheet of copper weighing 10.0 g and at an unknown temperature is placed flat on a sheet of iron weighing 20.0 g and at a temperature of 25.0°C. After the temperature of the two metals stops changing, the temperature of the copper and the iron is found to be 32.0°C. What was the initial temperature of the gold? ($c(\text{Fe}) = 0.444 \text{ J/gK}$; $c(\text{Cu}) = 0.385 \text{ J/gK}$)