

10/26 attendance, J Reymer

6.18) $\Delta G = \Delta H - T\Delta S$

$$\Delta S = PDX - RCT = (6 \times 213.8 + 5 \times 100) - (173.4 + \frac{15}{2} 205.2)$$

$$= -219.6 \text{ J/mol}\cdot\text{K}$$

$$\Rightarrow \Delta G = -3268 \times 10^3 \text{ J/mol}\cdot\text{K} - \underbrace{29815 + 219.6}_{\textcircled{O}}$$

$$\textcircled{O} 35473.74$$

$$= \textcircled{O} 3202.53 \times 10^3 \text{ J/mol}$$

Then $\Delta A = \Delta U - T\Delta S$

$$= [\Delta H - \Delta(PV)] - T\Delta S = \Delta G + T\Delta S + \Delta(PV) - T\Delta S$$

$$= \Delta G + RT\Delta n_{gas} = 3199 \text{ kJ/mol}$$