

- Consider the following reaction.



Calculate  $\Delta G^\circ$  (in  $\text{J mol}^{-1}$ ) for this reaction.

$\Delta G^\circ =$

Calculate the reaction quotient,  $Q$ , at  $25^\circ\text{C}$  when  $p(\text{H}_2\text{O}) = 18 \text{ mmHg}$ ,  
 $p(\text{Cl}_2\text{O}) = 2.0 \text{ mmHg}$  and  $p(\text{HOCl}) = 0.10 \text{ mmHg}$ .

$Q =$

In which direction will the reaction proceed spontaneously at these partial pressures?