

FREE ENERGY CALCULATION EXAMPLES					
VALUES OF K_{eq} GIVEN G°					
$G^\circ = -RT\ln K_{eq}$					
G° (kcal/mol)	R (kcal/mol*K)	T (kelvins)		K_{eq}	
			at equilibrium		
-10.0	1.987E-03	310	almost everything is converted to products ->	1.12E+07	irreversible forward
-5.0				3.35E+03	irreversible forward
-1.0			products reactants	5.07E+00	reversible
0.0			products reactants	1.00E+00	reversible
1.0			products reactants	1.97E-01	reversible
5.0				2.98E-04	irreversible backward
10.0			almost everything stays as reactants	8.90E-08	irreversible backward
HOW Q AFFECTS G					
$G = G^\circ + RT\ln Q$					
G° (kcal/mol)			Q	G (kcal/mol)	
-1.0		$Q = K_{eq}$	5.07	0.0	equilibrium
			20	0.8	backward
		add more products or remove reactants ($Q > K$)	10	0.4	backward
			6	0.1	backward
			4	-0.1	forward
		add more reactants or remove products ($Q < K$)	1	-1.0	forward
			0.1	-2.4	forward
			0.05	-2.8	forward