1 We have derived that dG = dGo + RT ln(Q). What is the value of Q when everything is in standard states?

A Q = infinity
B Q = 1
C Q = 0
D More information needed

2 We have derived that dG = dGo + RT ln(Q). What is the value of dG when everything is in standard states?

A dG = 0
B dG = 1
C dG = dGo
D More information needed

3 We have derived that dG = dGo + RT ln(Q). What is the value of dG when Q = K?

A dG = 0
B dG = 1
C dG = dGo
D More information needed

4 We have derived that dG = dGo + RT ln(Q). What is the value of dGo when Q = K?

A dGo = 0
B dGo = 1
C dGo = - RT ln(K)
D More information is needed

5 We have derived that dG = dGo + RT ln(Q). What is the value of dGo when Q does not equal K?

A dGo = 0
B dGo = 1
C dGo = - RT ln(K)
D More information is needed

6 We have derived that dGo = dHo - TdSo = - RT ln(K). How does ln(K) depend on T?

A ln(K) is proportional to T
B ln(K) is independent of T
C ln(K) is proportional to 1/T
D None of the above

7 We have derived that dGo = dHo - TdSo = - RT ln(K). What best describes the graph of ln(K) versus 1/T?

A An hyperbola
B A parabola
C A straight line
D None of the above

8 We have derived that dGo = dHo - TdSo = - RT ln(K). What is the slope of the graph of ln(K) versus 1/T?

A 1
B dHo/R
C -dHo/R
D 0 (horizontal line)

9 We have derived that dGo = dHo - TdSo = - RT ln(K). What is the value of ln(K) at infinite temperature.

A 0
B dSo/R
C infinite
D None of the above

10 Why does ln(K) at infinite temperature *not* depend on dHo?

A Reactions result in zero entropy in the surroundings when T = infinity.
B Reactions result in zero entropy change in the surroundings when T = infinity.
C Reactions result in zero entropy in the system when T = infinity.
D Reactions result in zero entropy change in the system when T = infinity.