

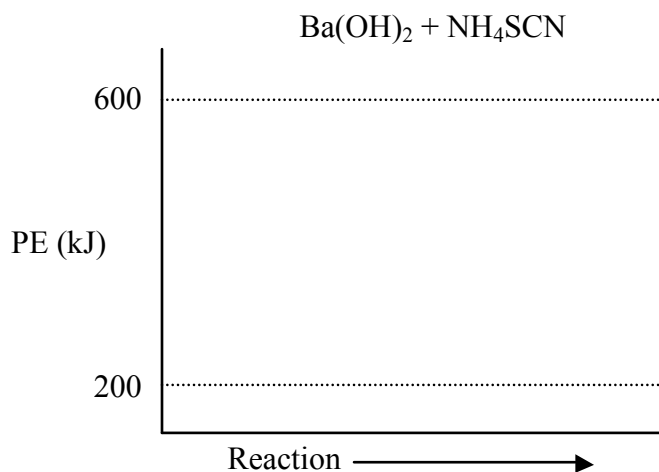
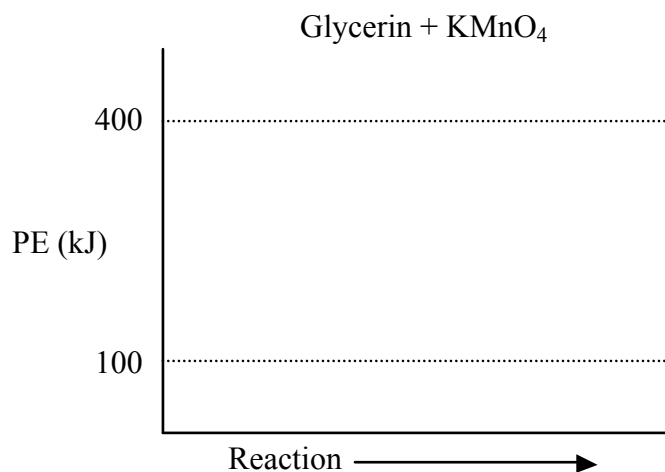
WKS
The Driving Forces

Name _____
Period _____

While viewing the video, "The Driving Forces," answer the questions as they are answered.

1. There is a natural direction of change for all systems, such as a river flowing to the sea. The natural direction of change for chemical reaction is to [**absorb, release**] heat.
2. When a chemical reaction releases heat, its energy [**increases, decreases**] and the energy of the surroundings [**increase, decrease**]. This kind of reaction is called [**exothermic, endothermic**].
3. When glycerin reacts with KMnO_4 , heat is released. The energy of the system [**increases, decreases**].

Fill in the reaction diagram, below left, from the information given:



4. When a chemical reaction absorbs heat, its energy [**increases, decreases**] and the energy of the surroundings [**increase, decrease**]. This kind of reaction is called [**exothermic, endothermic**].
5. Why does ΔH for an exothermic reaction have a negative value?
6. When Ba(OH)_2 reacts with NH_4SCN , heat is [**absorbed, released**] and the energy of the system [**increases, decreases**]. Fill in the reaction diagram, above right, from the information given.
7. Explain the meaning of ΔH_{rxn} . Why is ΔH_{rxn} sometimes positive and sometimes negative?
8. Heat is not the only driving force for chemical reactions. Reactions are also driven by _____, which increases as [**order, disorder**] among the chemicals increases.
9. The natural direction of systems is more [**order, disorder**] and [**lower, higher**] *entropy*.
10. Is it easy or hard to unmix a solution or a salad? _____
11. What changes in a system lead to an increase in entropy? _____

