**Temperature Conversions**

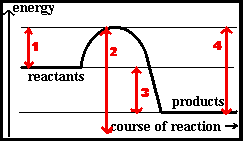
1. The boiling point of water on the Kelvin scale is \_\_\_\_\_\_\_\_\_\_\_\_.

Kelvin = **°**C + 273

**°**C = Kelvin - 273

1. 0 °F is also known as \_\_\_\_\_\_\_\_\_\_°C
2. 40.0 °C is what temperature on the Kelvin scale? \_\_\_\_\_\_\_\_\_\_
3. -20.0 °C is what temperature on the Fahrenheit scale? \_\_\_\_\_\_\_\_\_\_
4. 298 K is what temperature in degrees Fahrenheit? \_\_\_\_\_\_\_\_\_\_\_\_\_
5. Convert -145.0 °C to K \_\_\_\_\_\_\_\_\_\_\_
6. Convert 20.0 °C to K \_\_\_\_\_\_\_\_\_\_
7. Convert 252 K to °F \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Endothermic/Exothermic Review**

1. **Which of these processes is always exothermic**?
   1. Evaporation
   2. insulation
   3. combustion
   4. Melting
2. **When ammonium chloride dissolves in water the temperature falls. The type of energy change is described as**?
   1. exothermic
   2. activated
   3. endothermic
   4. a decomposition
3. **Which of these process is always exothermic**?
   1. melting
   2. condensing
   3. boiling
   4. Evaporation
4. **The chemical change when a fuel burns can be described as**?
   1. a precipitation
   2. an exothermic reaction
   3. a reversible reaction
   4. an endothermic reaction
5. **Heat is taken in when ammonium nitrate dissolves in water. This is an example of**?
   1. exothermic change
   2. endothermic charge
   3. electrolysis
   4. thermal decomposition
6. **Which of the following energy changes changes   
   corresponds to the overall energy change for the reaction**?
   1. energy change **2**
   2. energy change **1**
   3. energy change **3**
   4. energy change **4**
7. Equal amounts of four different substances (A-D) where added separately to equal amounts of an acid and a thermometer placed in the mixture. **For which substance is the reaction the most endothermic**?
   1. temperature rises by 5oC
   2. temperature falls by 3oC
   3. temperature rises by 3oC
   4. temperature falls by 5oC
8. Is each of the following reactions endothermic or exothermic? Explain your answers.
   1. When a certain amount of potassium nitrate is dissolved in water, the water temperature drops from23°C to 18°C.
   2. Jack cooks himself a steak.
   3. When cold water is mixed with sulphuric acid, the mixture can rapidly reach the boiling point of water.
   4. A flare burns up slowly.

Endothermic reactions:

|  |  |
| --- | --- |
|  |  |
|  | |

Exothermic reactions:

|  |  |
| --- | --- |
|  |  |
|  | |

1. In an exothermic reaction, is heat gained or lost in the system? Draw a diagram that shows the transfer of heat energy in an endothermic reaction.
2. In an endothermic reaction, is heat gained or lost in the system? Draw a diagram to illustrate the transfer of energy in an exothermic reaction.
3. Is ΔH positive or negative in an exothermic reaction?
4. Is ΔH positive or negative in an endothermic reaction?
5. Predict the sign of ΔH for the burning of a candle. Is this reaction endothermic or exothermic?

