

Name _____ Period _____

College Prep Chemistry of the Earth System

Assignment 2E – Heat Transfer and Absolute Temperature

20 Points

Answer the following questions based on the video and in class instruction.

For the following systems determine the sign on the heat and if the system is endo or exothermic

Re: $q_{total} = q_{final} - q_o (initial)$, Exothermic, $q = -$, Endothermic, $q = +$

<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 10px;">A</div> <div style="text-align: center;">→</div> <div> $q_o = 92J$ $q_f = 12J$ </div> </div>		<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 10px;">B</div> <div style="text-align: center;">←</div> <div> $q_o = 10J$ $q_f = 85J$ </div> </div>	
Heat (q) System		Heat (q) System	
Heat (q) Surround		Heat (q) Surround	
Endo/Exothermic		Endo/Exothermic	
<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 10px;">C</div> <div style="text-align: center;">←</div> <div> $q_o = 38J$ $q_f = 83J$ </div> </div>		<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 10px;">D</div> <div style="text-align: center;">→</div> <div> $q_o = 90J$ $q_f = 14J$ </div> </div>	
Heat (q) System		Heat (q) System	
Heat (q) Surround		Heat (q) Surround	
Endo/Exothermic		Endo/Exothermic	

Define the following terms based on energy of a system

Temperature		Absolute Temperature	
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Convert the following measurements between $^{\circ}C$ and K ($^{\circ}C = K - 273.15$, $K = ^{\circ}C + 273.15$)

Convert $34.5^{\circ}C$ to K	Convert $-19.4^{\circ}C$ to K
Convert $392.4K$ to $^{\circ}C$	Convert $219.5K$ to $^{\circ}C$