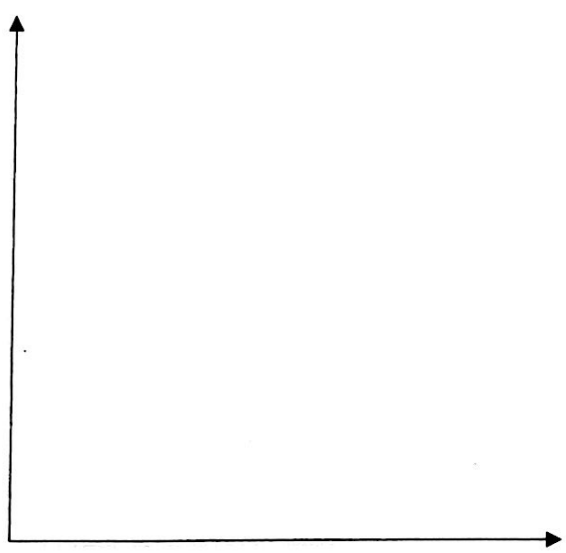
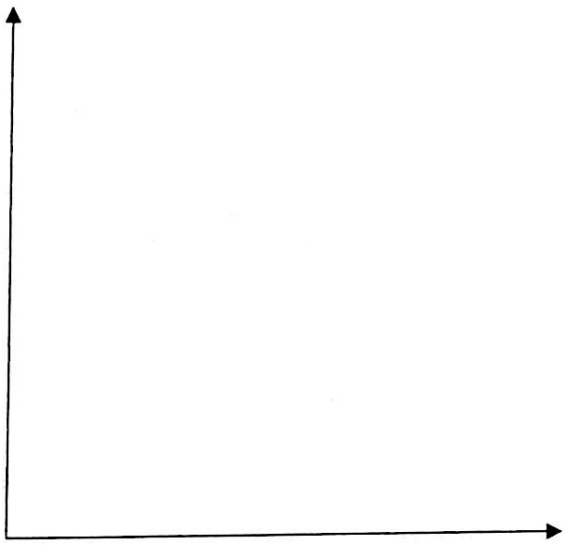
Thermochemistry Review Name:_____Period:_____

Draw and label an **endothermic** & **exothermic** reaction:





Classify these processes as exothermic or endothermic

a. Condensing steam
b. Burning alcohol
c. Evaporating alcohol
d. Baking a potato

Heat & Enthalpy

The enthalpy ΔH of an exothermic reaction has what sign?

What always happens when two objects of different temperatures come in contact? Give an example of your own experience.

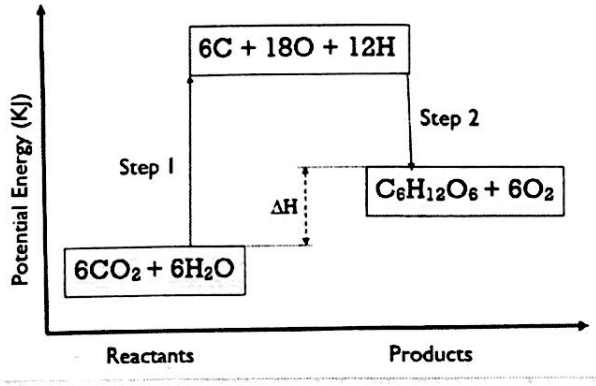
Calculate the quantity of heat gained or lost in the following changes. Identify as exo or endo!

a. 3.50 g of water is cooled from 65* to -10*C.

b. 44 g of water is heated from 38 to 105°C.

A 39g sample of Kemperillium is heated from 7 to 230*C releasing 20,120 J of heat, what is the specific heat of Kemperillium?

Bond Energy



Bond	Energy (kJ/mol)	Bond	Energy (kJ/mol)
H—H	432	N—N	160
C—H	411	N=O	631
N—H	386	N≡N	941
H—Cl	431	N—O	201
C—C	346	Cl—Cl	243
C—O	358	F—F	158
C—N	305	O—H	464
C—Cl	327	O—Cl	269
C=C	602	O—O	204
C=O	745	C—F	552
O=O	494	C—S	259

What do the values in the table represent?

What is the energy requirement for step one? What type of process is this?

What is the energy requirement for step two? What type of process is this?

Calculate ΔH:

Is this an endothermic or exothermic process? How do you know?

When you have completed this review look over your notes, make sure you know the terminology in this unit and are confident with the calculations.