

Names: _____

 20 Pts.

Calorimetry Data Sheet
Show ALLL work with proper units and sig figs!!!

Metal _____	Water
Mass of metal:	Mass of water in calorimeter:
Initial T of metal (boiling water bath):	Initial T (T of water in calorimeter):
Final T of metal (highest T in calorimeter):	Final T of water (highest T in calorimeter):
ΔT :	ΔT :
Calculate heat absorbed by water (= heat released by metal):	
Calculate the Specific Heat of the Metal:	
Theoretical Value of Specific Heat of Metal:	Percent Error:

Metal _____	Water
Mass of metal:	Mass of water in calorimeter:
Initial T of metal:	Initial T:
Final T of metal:	Final T of water:
ΔT :	ΔT :
Calculate heat absorbed by water (= heat released by metal):	
Calculate the Specific Heat of the Metal:	
Theoretical Value of Specific Heat of Metal:	Percent Error:

Metal _____	Water
Mass of metal:	Mass of water in calorimeter:
Initial T of metal:	Initial T:
Final T of metal:	Final T of water:
ΔT :	ΔT :
Calculate heat absorbed by water (= heat released by metal):	
Calculate the Specific Heat of the Metal:	
Theoretical Value of Specific Heat of Metal:	Percent Error:

Conclusion Questions:

- The specific heat of gold is $0.128 \text{ J/g}^\circ\text{C}$. The specific heat of krypton is $0.247 \text{ J/g}^\circ\text{C}$.
 - If 20.0 grams of each substance cools from are from 50°C to 25°C which loses more heat? Explain.
 - Which has more kinetic energy at 25°C ? Explain.
 - If 10 grams of each substance absorbs 100 kJ of heat which will have the higher final temperature? Explain.
 - If 10 grams of each substance absorbs 100 kJ which will have more heat? Explain.
- If 100 grams of water at 10°C is mixed with 100 grams of water at 40°C what is the predicted final temperature of the water mixture?
- Which change in kinetic energy is the greatest? 10°C to 100°C , 10 K to 100 K or 10°F to 100°F ? At what Celsius temperature is all kinetic energy absent?