Name:_____

Work in **pairs** to finish the following group quiz. <u>Everyone</u> should turn in a completed copy of the quiz before the end of the hour. **Show All Work!**

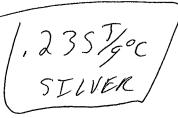
1. Determine the amount of energy is required to raise the temperature of 12.5 grams of water from 40° Celsius to 74° Celsius.

[1776.55]

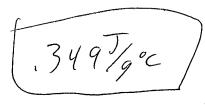
2. What quantity of energy is required to heat a piece of iron weighing 3.5 grams from 35 degrees Celsius to 55 degrees Celsius?

[31, 435]

3. A 5.0 gram sample of a metal requires 6 J of energy to change its temperature from 23 to 28.1 degrees Celsius. What is the metal?



4. If 34,000 J of heat is applied to a 9110 gram block of metal the temperature increases 10.7 degrees Celsius. Calculate the specific heat capacity of the metal.



5. A 35.2 gram sample of a iron requires 125.1 J of energy to heat. Calculate the change in temperature.

6 A 50.0 gram piece of metal is placed in an oven at 300° C. The metal is transferred to 100 grams water in a foam cup calorimeter with an initial temperature of 22.42° C. If the temperature of the water increases to 30° C what is the identity of the metal?

	METAL	H20
m	50g	1009
(7	4.18%
Y,'	300°(22.42%
Tf	30°(30°

Q = 100g (4.187gac) 758°C = 3168.44T

C = .235 Jg °C $Ag \cdot \text{silver}$

Specific Heat Capacity Values

 $H_2O = 4.18 \text{ J/g*}^{\circ} \text{ C}$ Au = .128 J/g* $^{\circ}$ C Ag= .235 J/g* $^{\circ}$ C $Cu = .385 \text{ J/g*}^{\circ} \text{ C}$

Fe= .449 $J/g^{*\circ}$ C