Name _____ Period _____

College Prep Chemistry of the Earth System

Assignment 7D – Specific Heat of Matter 20 Points

*Define the following terms based on energy of a system*

| Define Specific Heat | What defines the specific heat constant (*c*)? |
|---|---|
| | |

*Solve the following heat capacity problems* [*Specific Heat Equation*: **q = c·m·ΔT**]

| $c_{Al}$ = 0.900J/°C , $m_{Al}$ = 26.39g<br>ΔT = 16.38°C | $c_{Ba}$= 0.203J/°C , $m_{Ba}$ = 39.42g<br>ΔT = -38.42°C |
|---|---|
| q = | q = |
| q = | q = |

| $c_{Fe}$= 0.46J/°C , $m_{Fe}$ = 29.28g<br>ΔT = 104.21°C | $c_{Pb}$= 0.13J/°C , $m_{Pb}$ = 43.49g<br>ΔT = -14.21°C |
|---|---|
| q = | q = |
| q = | q = |

| $c_{Ni}$= 0.44J/°C , $m_{Ni}$ = 8.49g<br>$T_{ini}$ = 29.52°C, $T_{final}$ = 41.42°C | $c_{Si}$= 0.71J/°C , $m_{Si}$ = 53.57g<br>$T_{ini}$ = 102.48°C, $T_{final}$ = 68.15°C |
|---|---|
| ΔT = | ΔT = |
| ΔT = | ΔT = |
| q = | q = |
| q = | q = |