Astronomy Ranking Task:
Heat and Temperature

Exercise #3

Description: The following are each typical samples with no unusual properties.

letter	material	specific heat capacity J / (g °C)
A	liquid water	4.186
B	copper	0.385
C	average human	3.55
D	dry cement	1.55

A. Ranking instructions: Rank the specific heat capacities of the samples from greatest to least.

Ranking Order: Greatest   1 _____   2 _____   3 _____   4 _____   Least

Or, all of the samples have the same specific heat capacity. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____

_____

_____

_____

_____

B. Ranking instructions: Assuming you have an equal mass of each and that each sample undergoes the same amount of increase in temperature, rank from greatest to least how much heat was required to change the temperatures of the samples.

Ranking Order: Greatest   1 _____   2 _____   3 _____   4 _____   Least

Or, all of the samples require the same amount of heat. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____

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_____

C. Ranking instructions: Assuming you have an equal mass of each and that each sample undergoes the same amount of increase in temperature, rank from greatest to least how much time was required to change the temperatures of the samples.

Ranking Order: Greatest   1 _____ 2 _____ 3 _____ 4 _____ Least

Or, all of the samples require the same amount of time. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____

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