Assignment Temperature Conversions and Thermal Energy

Due May 6, 2020 **Total: [/16]**

Name:

1. Convert the following temperatures to the indicated scales.
   a. 78 F = _____ ^{o}C
   b. 67 ^{o}C = _____ K
   c. 42 ^{o}C = _____ F
   d. 100 F = _____ K [/4]

2. What mass of silver, in grams, goes from -16°C to 58°C when heated by 11.7 kJ of heat? [/4]

3. Find the initial temperature of 0.355 kg of glycerin if it is heated by 600 J of heat to produce a final temperature of 91°C.? [4]

4. Brooklyn heats 10 kg of an unknown substance from 1oC to 40oC and finds that it produces 152 100 J of thermal energy. Determine the specific heat capacity, C, of the substance and using the chart determine what the substance is. [/4]