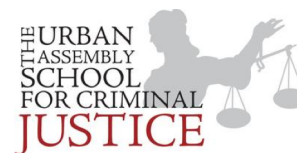


Name: _____ Date: _____

Chemistry ~ Ms. Hart

Class: Anions or Cations



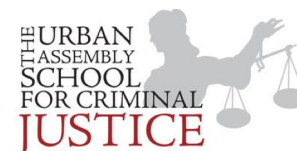
2.12 Classwork/HW

1. The specific heat capacity of ethanol is $2.44 \text{ J/(g}^\circ\text{C)}$. Why is more heat required to raise the temperature of a given mass of water a given number of degrees than is needed to raise the same mass of ethanol (a liquid) by the same number of degrees?
2. If the temperature of 34.4 g of ethanol increases from 25.0°C to 78.8°C , how much heat has been absorbed by the ethanol?
3. A 4.50-g nugget of pure gold absorbed 276 J of heat. What was the final temperature of the gold if the initial temperature was 25.0°C ? The specific heat capacity of gold is $0.129 \text{ J/(g}^\circ\text{C)}$
4. A 155-g sample of an unknown substance was heated from 25.0°C to 40.0°C . In the process, the substance absorbed 5696 J of energy. What is the specific heat of the substance?

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5. The temperature of 15 grams of water increased by 3.0°C . How much heat was absorbed by the water?
1. 150 J
 2. 45 J
 3. 18.9 J
 4. 189 J
6. Approximately many joules of heat energy are released when 50 grams of water are cooled from 70°C to 60°C ?
1. 210 J
 2. 100 J
 3. 2,100 J
 4. 1,000 J
7. When 200 grams of water cools from 50.0°C to 25°C , the total amount of heat energy released by the water is
1. 210 J
 2. 21000 J
 3. 42000 J
 4. 1500 J
8. The temperature of 100 grams of water changes from 16°C to 20°C . What is the total number of joules of heat energy absorbed by the water?
1. 210 J
 2. 168 J
 3. 42,000 J
 4. 1,680 J
9. Approximately how many joules of heat are required to raise the temperature of 20 grams of water from 30°C to 40°C ?
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 2. 168 J
 3. 420 J
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