	A sample of aluminum absorbs 50 J of heat, upon which the temperature of the sample increases from 20°C to 35°C. If the specific heat of aluminum is 0.900 J/g°C. What is the mass of the sample?
2)	Calculate the energy required to increase the temperature of 2kg of water from 20°C to 100°C. The specific heat capacity of water is 4200 J/kg°C.
3)	Calculate the rise in temperature if a 1600 g of gold absorbs 3000 J of energy. The specific heat capacity of gold is 129 J/kg K.

Heat Calculations

increases from 25 °C to 78.8 °C, how much heat has been absorbed by the ethanol? The specific heat of ethanol is 2.44 J/(gx°C) Endothermic or exothermic? 5. Copper has a specific heat of 0.385 J/(gx°C). A piece of copper absorbs 5000 J of energy and undergoes a temperature change from 100 °C to 200 °C. What is the mass of the piece of copper? Endothermic or exothermic? Liquid water at 65.5 °C loses 9750 J heat, what is the final temperature of the watchange? The specific heat of water is 4.18 J/(gx°C).	a. Perform calculations using: $(q = m \cdot c \cdot \Delta T)$ b. 1. Gold has a specific heat of 0.129 J/($g \times C$). How many joules of heat energy are required to raise the temperature of 15 grams of gold from 22 °C to 85 °C?	2. An unknown substance with a mass of 100 grams absorbs 1000 J while undergoing a temperature increase of 15 °C. What is the specific heat of the substance?
increases from 25 °C to 78.8 °C, how much heat has been absorbed by the ethanol? The specific heat of ethanol is 2.44 J/(gx°C) Endothermic or exothermic? 5. Copper has a specific heat of 0.385 J/(gx°C). A piece of copper absorbs 5000 J of energy and undergoes a temperature change from 100 °C to 200 °C. What is the mass of the piece of copper? Endothermic or exothermic? Liquid water at 65.5 °C loses 9750 J heat, what is the final temperature of the watchange? The specific heat of water is 4.18 J/(gx°C).	Endothermic or exothermic?	Endothermic or exothermic?
5. Copper has a specific heat of 0.385 J/(gx°C). A piece of copper absorbs 5000 J of energy and undergoes a temperature change from 100 °C to 200 °C. What is the mass of the piece of copper? Endothermic or exothermic? 8. If 335 g of water at 65.5 °C loses 9750 J heat, what is the final temperature of the water temperature change? The specific heat of water is 4.18 J/(gx°C).	increases from 25 °C to 78.8 °C, how much heat has been absorbed by the ethanol? The specific heat	j , , , , , , , , , , , , , , , , , , ,
5. Copper has a specific heat of 0.385 J/(gx°C). A piece of copper absorbs 5000 J of energy and undergoes a temperature change from 100 °C to 200 °C. What is the mass of the piece of copper? Endothermic or exothermic? 8. If 335 g of water at 65.5 °C loses 9750 J heat, what is the final temperature of the water temperature change? The specific heat of water is 4.18 J/(gx°C).	Endothermic or exothermic?	Endothermic or exothermic?
7. A 40 g sample of water absorbs 500 Joules of energy. How much did the water temperature change? The specific heat of water is 4.18 J/(g×°C). 8. If 335 g of water at 65.5 °C loses 9750 J heat, what is the final temperature of the war Liquid water has a specific heat of 4.18 J/(g×°C).	5. Copper has a specific heat of $0.385 \mathrm{J/(gx^{\circ}C)}$. A piece of copper absorbs 5000 J of energy and undergoes a temperature change from $100 ^{\circ}C$ to	6. 45 grams of an unknown substance undergoes a temperature increase of 38 °C after absorbing 4172.4 Joules. What is the specific heat of the substance? Look at the table on page 513 of your
7. A 40 g sample of water absorbs 500 Joules of energy. How much did the water temperature change? The specific heat of water is 4.18 J/(g×°C). 8. If 335 g of water at 65.5 °C loses 9750 J heat, what is the final temperature of the war Liquid water has a specific heat of 4.18 J/(g×°C).	Endothermic or exothermic?	Endothermic or exothermic?
	7. A 40 g sample of water absorbs 500 Joules of energy. How much did the water temperature	8. If 335 g of water at 65.5 °C loses 9750 J of heat, what is the final temperature of the water? Liquid water has a specific heat of 4.18 J/(g×°C).
Endothermic or exothermic? Endothermic or exothermic?	Endothermic or exothermic?	Endothermic or exothermic?