

Name: \_\_\_\_\_ Band: \_\_\_\_\_

**HW 10.1 specific heat**

Convert 444 calories to joules and kilojoules.

= \_\_\_\_\_ joules

= \_\_\_\_\_ kJ

Convert 1.85 kilojoules to joules.

= \_\_\_\_\_ joules

= \_\_\_\_\_ kJ

If you are on a diet that calls for eating no more than 1200 Calories per day, how many joules is that? How many kilojoules?

= \_\_\_\_\_ joules

= \_\_\_\_\_ kJ

When 435 Joules of heat is added to 3.4 g of olive oil at 21 °C, the temperature increases to 85 °C. What is the specific heat of the oil?

= \_\_\_\_\_ J/g °C

A piece of stainless steel weighing 1.55 grams absorbs 141 joules of heat when its temperature increases by 178 °C. What is the specific heat of the stainless steel?

= \_\_\_\_\_ J/g °C

How many kilojoules of energy will be released by an apple containing 125 Calories?

= \_\_\_\_\_ kJ

The temperature of a 6.0 gram sample of glass absorbed 550 J of heat. The specific heat of the glass is 3.6 J/g°C. How many °C did the glass sample change?

= \_\_\_\_\_ °C

How many calories are needed to raise the temperature of water from 20 to 50 °C if the water weighs 75 grams?

= \_\_\_\_\_ calories

The specific heat of a metal is 2.1 J/g°C. The temperature of the metal changed from 25 to 50 °C when it absorbed 420 J heat. What is the mass of the metal?

= \_\_\_\_\_ g

How many kJ of energy will be released by a banana containing 150 Calories?

= \_\_\_\_\_ kJ

What is the number of calories required to raise the temperature of 55 g of water from 25 to 45 °C?

= \_\_\_\_\_ calories