

1. Convert 1.11 cal to Cal

1.11x10<sup>-3</sup> Cal

2. Convert 2.22 Cal to J

9290 J

3. Convert 6.33 cal to KJ

0.0265 KJ

4. The temperature of a sample of a metal with a mass of 4.44 g is changed from 55.5 °C to 85.5 °C when it absorbs 123 J of heat. Calculate the specific heat of the metal.

Answer: 0.923 J/(g °C).

5. A 5.55 gram sample of pure gold absorbs 375 J of heat. What was the final temperature of the gold if the initial temperature was 30.0 °C? The specific heat for gold is 0.129 J/(g °C).

Answer: 554 °C

6. A metal absorbs 667 J of heat as it's temperature increases from 1 °C to 25 °C. The specific heat for the metal is 0.300 J/(g °C). What was the mass of the metal that heated?

Answer: 92.6 g

7. 77.7 grams of a chemical absorbs 444 J of heat. Calculate the change in temperature of the chemical if it has a specific heat of 0.444 J/(g °C).

Answer: 12.9 °C

