

Answers to practice problems in page 61

Answers to Practice Problems B

1. 0.069 J/g•K
2. 0.385 J/g•K
3. 329 K
4. 3.6 kJ

Homework

Additional Practice Have students solve the following problems:

1. A 5.00 g sample of a metal was heated from 25.0°C to 40.0°C and it absorbed 17.6 J of energy. What is its specific heat capacity? What was the identity of the metal? **Ans. 0.235 J/g•K, silver**
2. A 1.6 g sample of a metal was heated from 273 K to 300 K and it absorbed 5.57 J of energy. What is the metal's specific heat capacity? **Ans. 0.13 J/g•K**
3. Air has a heat capacity of 1.007 J/g•K. The density of air is 1.161 g/L. How much energy is needed to heat 2.00 liters of air from 293 K to 298 K?
Ans. 11.7 J