# INTERPRETING GRAPHICS

17

Use with Section 17.2

A student performed an experiment to determine the specific heat of an unknown metal. The data she collected is organized in the table below. Use this information to answer the following questions.

Quantity	Trial 1	Trial 2
1. Mass of test tube + metal	118.19 g	118.21 g
2. Mass of test tube	67.86 g	67.86 g
3. Mass of metal	50.33 g	50.35 g
4. Mass of calorimeter	7.037 g	3.818 g
5. Mass of calorimeter + water	46.137 g	43.270 g
6. Mass of water	39.100 g	39.452 g
7. Initial temperature of metal	100.0°C	100.0°C
8. Initial temperature of water	22.0°C	21.0°C
9. Final temperature of water	27.0°C	26.5°C

foam-cup calorimeter   foam-cup calorimeter + metal
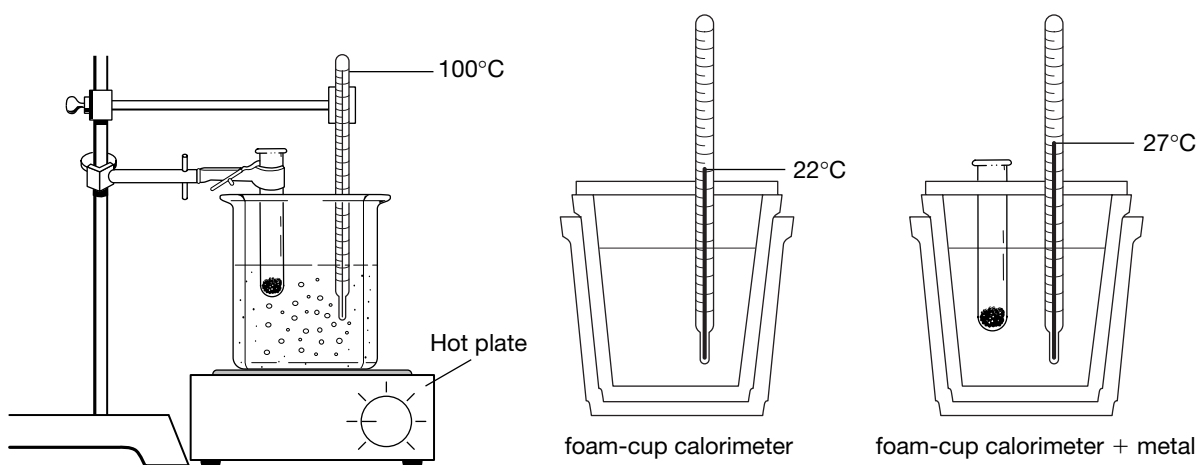
1. What was the final temperature of the metal?

   a. Trial 1

   b. Trial 2

2. What was the ΔT for the metal?

   a. Trial 1

   b. Trial 2

3. What was the ΔT for the water?

   a. Trial 1

   b. Trial 2

4. Calculate the heat change for the water. (Specific heat capacity for water is 4.184 J/g•C.)

   a. Trial 1

   b. Trial 2

5. Calculate the heat change for the metal.

   a. Trial 1

   b. Trial 2

6. Calculate the specific heat of the metal.

   a. Trial 1

   b. Trial 2

7. What metal might this have been?

   a. aluminum   **b.** silver   **c.** iron   **d.** mercury