

Calculate the amount of heat in joules absorbed or released in the following situations.

1. 40.0 grams of water is heated from 10.0°C to 30.0°C.
2. 25.0 grams of water cooled from 85°C to 40.0 °C.
3. 65.5 grams of water heated from 32.5 °C to 48.7 °C.
4. 135.6 grams of water cooled from 95.8°C to 21.6°C.
5. 30.0 grams of aluminum heated from 15.0°C to 35.0°C
6. 450.0 grams of iron cooled from 125.0°C to 45°C.
7. 62.3 grams of gold heated from 21.7°C to 136.4°C.
8. 195.4 grams of silver cooled from 120.6°C to 14.9°C
9. 1.5 kilograms of carbon heated from 21.7°C to 136.4 °C.
10. A mixture of 5.8 grams of aluminum and 6.2 grams of iron heated from 5.8°C to 12.1°C.