

Thermochemistry and Gas Laws Unit Review

Energy Math

1. How much energy is released when a brick with a mass of 329g is cooled from 80°C to 50°C? The specific heat capacity of brick is 0.84 J/g°C.

$$Q = mc\Delta T$$

$$(329g)(0.84J/g^{\circ}C)(-30^{\circ}C)$$

$$Q = -8290J$$

2. What is the mass of a hotdog that releases 3600 J of energy as it is cooled from 95°C to 45 °C? The specific heat capacity of a hotdog is 1.5 J/g°C.

$$m = \frac{-3600J}{(1.5J/g^{\circ}C)(-50^{\circ}C)} = 48g$$

3. What is the specific heat capacity of a 350 g object that rises in temperature 15°C when 55,900 J of energy are added?

$$C = \frac{55900J}{(350g)(15^{\circ}C)} = 10.6J/g^{\circ}C$$

4. 45,920 J of energy are added to a 365g block of copper originally at 35°C. What will the new temperature of the copper be? The specific heat capacity of copper is 0.385 J/g°C.

$$\Delta t = \frac{45920J}{(365g)(0.385J/g^{\circ}C)} = 326^{\circ}C = T_f - 35^{\circ}C$$

$$+35^{\circ}C \quad +35^{\circ}C$$

$$361^{\circ}C = T_f$$

5. 89,290 J of energy are removed from a 670 g block of aluminum originally at 125°C. What will the new temperature of the aluminum be? The specific heat capacity of aluminum is 0.902 J/g°C.

$$\Delta t = \frac{-89290J}{(670g)(0.902J/g^{\circ}C)} = -148^{\circ}C = T_f - 125^{\circ}C$$

$$+125^{\circ}C \quad +125^{\circ}C$$

$$-23^{\circ}C = T_f$$

Energy And Thermochemistry Review Guide Key

Victor M. Corman



Energy And Thermochemistry Review Guide Key:

Energy And Thermochemistry Review Guide Key Book Review: Unveiling the Magic of Language

In a digital era where connections and knowledge reign supreme, the enchanting power of language has become more apparent than ever. Its capability to stir emotions, provoke thought, and instigate transformation is truly remarkable. This extraordinary book, aptly titled "**Energy And Thermochemistry Review Guide Key**," compiled by a very acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound effect on our existence. Throughout this critique, we shall delve into the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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