

[Alvarenga e Máximo – Física, vol II] Questão 10

$$C = \Delta Q / \Delta \Theta$$

$$C = 330 \text{ cal} / 30^\circ\text{C}$$

$$C = 33 \text{ cal} / 3^\circ\text{C}$$

$$C = 11 \text{ cal} / ^\circ\text{C}$$

Ou

$$C = (41,8 + 4,18) \text{ J} / ^\circ\text{C}$$

$$C = 45,98 \text{ J} / ^\circ\text{C}$$

[Alvarenga e Máximo – Física, vol II] Questão 11

(a)

$$\Delta \Theta = 100 - 20 = 80^\circ\text{C}$$

$$\Delta Q = ?$$

$$C = 11 \text{ cal} / ^\circ\text{C}$$

$$C = \Delta Q / \Delta \Theta$$

$$11 \text{ cal} / ^\circ\text{C} = \Delta Q / 80^\circ\text{C}$$

$$11 \text{ cal} = \Delta Q / 80$$

$$80 \cdot 11 \text{ cal} = \Delta Q$$

$$80 (10+1) = \Delta Q$$

$$800 + 80 = \Delta Q$$

$$880 \text{ calorias} = \Delta Q$$

(b)

$$\Delta \Theta = 0 - 100 = -100^\circ\text{C}$$

$$\Delta Q = ? \text{ (será a quantidade de calor liberada pela baixa de temperatura)}$$

$$C = 11 \text{ cal} / ^\circ\text{C}$$

$$C = \Delta Q / \Delta \Theta$$

$$11 \text{ cal} / ^\circ\text{C} = \Delta Q / (-100)^\circ\text{C}$$

$$11 \text{ cal} = \Delta Q / (-100)$$

$$(-100) \cdot 11 \text{ cal} = \Delta Q$$

$$(-100) (10+1) = \Delta Q$$

$$-1000 - 100 = \Delta Q$$

$$-1.100 \text{ calorias} = \Delta Q$$