

Trabajo de Calor y Temperatura

$$21) 0,11 = \frac{Q}{10(300-20)}$$

$$1,1 = \frac{Q}{280}$$

$$\underline{308 \text{ kcal} = Q}$$

$$22) Q = 1,2(100-20)$$

$$\underline{Q = 160 \text{ kcal}}$$

$$23) 300 \cdot 0,09(240-T) = 270 \cdot (T-20)$$

$$216 - 0,9T = 9(T-20)$$

$$396 = 9,9T$$

$$\underline{40^\circ\text{C} = T}$$

$$24) 100 \cdot 0,2(100-T) = 400 \cdot 0,1(T-70)$$

$$\frac{2}{10}(100-T) = 4 \cdot \frac{1}{10}(T-70)$$

$$100 - T = 2T - 140$$

$$240 = 3T$$

$$\underline{20^\circ\text{C} = T}$$

$$25) 120 = 2(T-20)$$

$$120 = 2T - 40$$

$$160 = 2T$$

$$\underline{80^\circ\text{C} = T}$$

$$26) C_e = \frac{1500}{100 \cdot 30}$$

$$\underline{C_e = 0,5 \text{ cal/g}^\circ\text{C}}$$

$$27) 0,5 = \frac{Q}{0,230} \quad 1006 \rightarrow 1 \text{ kg}$$

$$\frac{5}{10} \cdot \frac{2}{10} \cdot 30 = Q$$

$$\boxed{3 \text{ Kcal} = Q}$$

$$28) 3m \cdot 1(3T - 50) = m \cdot 1(50 - T)$$

$$9T - 150 = 50 - T$$

$$10T = 200$$

$$T = 20^\circ\text{C}$$

$$\rightarrow \boxed{3T = 60^\circ\text{C}}$$

$$29) 6 \cdot 1(90 - 40) = m \cdot 1(40 - 20)$$

$$3000 = 20m$$

$$\boxed{150 = m}$$

$$30) Q = 40 \cdot 1 \cdot 100$$

$$\boxed{Q = 4000 \text{ Kcal}}$$

$$31) C_c = \frac{1}{6,50}$$

$$\boxed{C_c = 0,4 \text{ cal/g}^\circ\text{C}}$$

$$32) 0,03 = \frac{Q}{10 \cdot (40 - 10)}$$

$$\frac{3}{100} = \frac{Q}{300}$$

$$\boxed{9 \text{ cal} = Q}$$

33)

$$34) 50 \cdot 0,8(100 - 30) = m \cdot 1(30 - 20)$$

$$40(70) = 10m$$

$$\boxed{2800 \text{ g} = m}$$