

Act. n° 12. pag 19. (T1).

Datos

$$W = ?$$

$$m_c = 100 \text{ kg}$$

$$P_c = 9000 \frac{\text{kcal}}{\text{kg}}$$

$$\eta = 40\%$$

$$E_{\text{suminist}}^{\text{TOTAL}} = m \cdot P_c = 100 \cdot 9000 = 9 \cdot 10^5 \text{ kcal}$$

$$\eta = \frac{E_{\text{util}}}{E_{\text{sum}}} \cdot 100 \Rightarrow E_{\text{util}} = \eta \cdot \frac{E_{\text{sum}}}{100} =$$

$$= \frac{40 \cdot 9 \cdot 10^5}{100} = 360.000 \text{ kcal}$$

Pasamos a unidades del S.I.:

$$360.000 \text{ kcal} \cdot \frac{10^3 \text{ cal}}{1 \text{ kcal}} \cdot \frac{4.18 \text{ J}}{1 \text{ cal}} = 1504800 \cdot \text{kJ}$$

$$\approx \underline{\underline{15 \cdot 10^8 \text{ J}}}$$