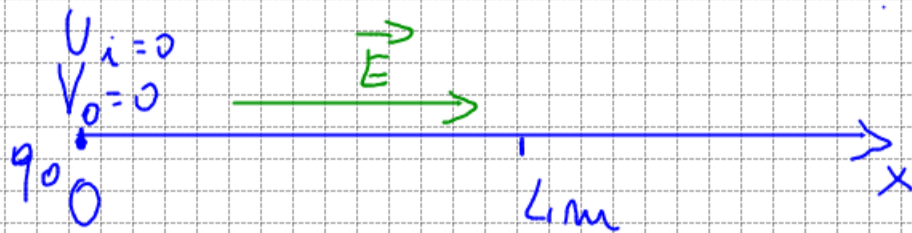


# ESERCIZIO N 32 PAG 883

$$E = 2,0 \text{ k} \frac{\text{N}}{\text{C}} \quad q_0 = 3,0 \text{ } \mu\text{C}$$

$$x = 4,0 \text{ m}$$

$$U = ?$$



$$\begin{aligned} \text{a) } \Delta U &= (U_f - U_i) = -V_f + 0 = +L = \int \vec{F} \cdot dx = +qE x = \\ &= + (3,0 \times 10^{-6} \text{ C}) \cdot \left( 2 \times 10^3 \frac{\text{N}}{\text{C}} \right) \cdot (4,0 \text{ m}) = \\ &= +24 \times 10^{-3} \text{ Nm} = +2,4 \times 10^{-2} \text{ J} \end{aligned}$$

l'energia diminuisce di  $2,4 \times 10^{-2} \text{ J}$

$$\text{b) } E_{c_f} = \frac{1}{2} m v^2 \quad \text{in } x = 4,0 \text{ m}$$

$$E_{c_f} = +V_f = 2,4 \times 10^{-2} \text{ J}$$

$$\text{c) } \Delta V = -E \Delta x \quad \Delta x = 4,0 \text{ m}$$

$$\Delta V = -8,0 \times 10^3 \text{ V}$$

$$\text{d) } \Delta V = -E \Delta x \quad \Delta x = 2,0 \text{ m}$$

$$V_{4m} = -2,0 \times 10^3 \frac{\text{N}}{\text{C}} \times 2,0 \text{ m} = -4,0 \times 10^3 \text{ V}$$

$$V_{0m} = -V_{4m} = 4,0 \times 10^3 \text{ V}$$