

ES. DI MATEMATICA:

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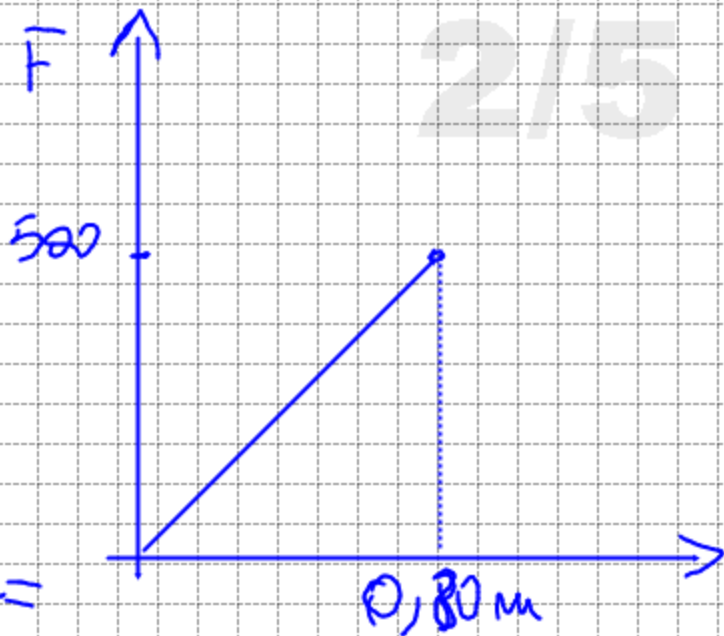
Esercizio pag 119 n 15

$$l = 50 \text{ m}$$

$$F = 500 \text{ N}$$

$$\Delta s = 80 \text{ cm}$$

$$L = \frac{\Delta s \cdot F}{2} = \frac{0,80 \text{ m} \cdot 500 \text{ N}}{2} = 200 \text{ J}$$



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$$F = 10 \text{ N} \quad d < 4 \text{ cm}$$

$$F = 0 \quad d = 4 \text{ cm}$$

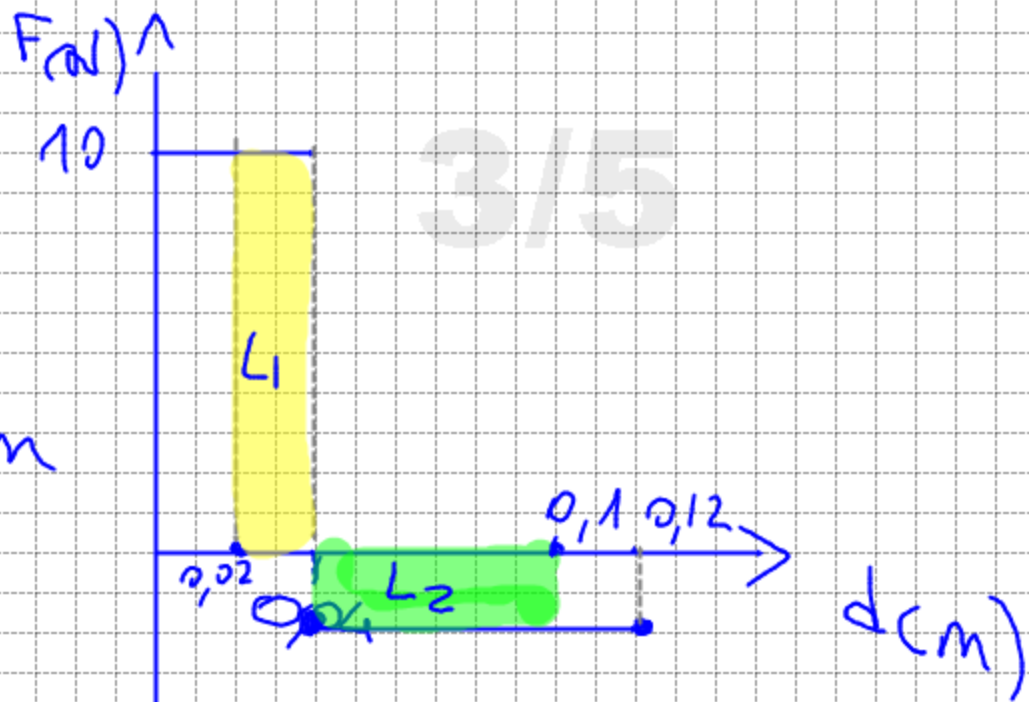
$$F = -2 \text{ N} \quad 4 \text{ cm} \leq d \leq 12 \text{ cm}$$

$$F = 0 \quad d > 12 \text{ cm}$$

$$L_1 = 0,02 \text{ m} \cdot 10 \text{ N} = 0,2 \text{ J}$$

$$L_2 = 0,06 \text{ m} \cdot (-2 \text{ N}) = -0,12 \text{ J}$$

$$L_{\text{TOT}} = 0,2 \text{ J} - 0,12 \text{ J} = 0,08 \text{ J}$$

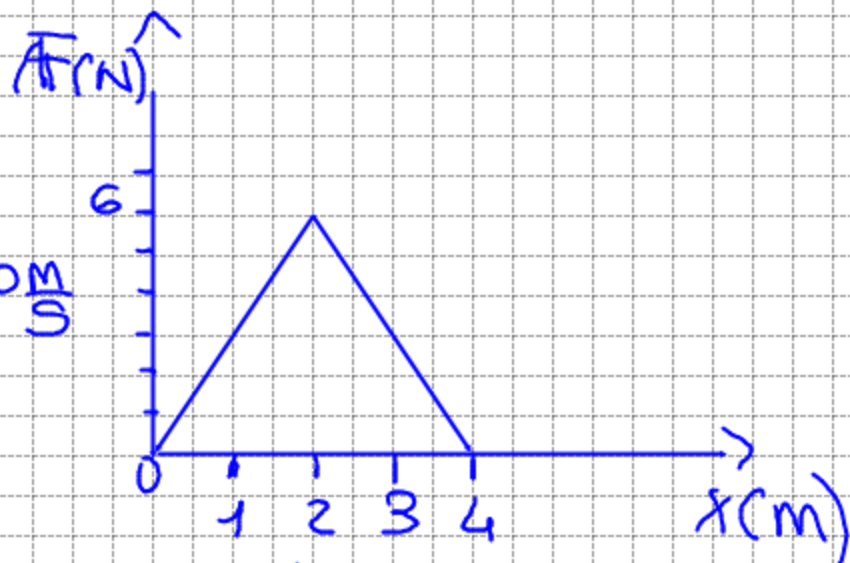


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$$M = 2,0 \text{ kg}$$

$$x = 0 \quad v_0 = 3,0 \frac{\text{m}}{\text{s}}$$

$$\Delta x = 4 \text{ m}$$



$$L = \frac{\Delta x \cdot F_{\text{max}}}{2} = \frac{4 \text{ m} \cdot 6 \text{ N}}{2} = 12 \text{ J}$$

Tra  $x=0$  m e  $x=2$  m il lavoro è positivo  $\Rightarrow L = \bar{F} \Delta s \Rightarrow$

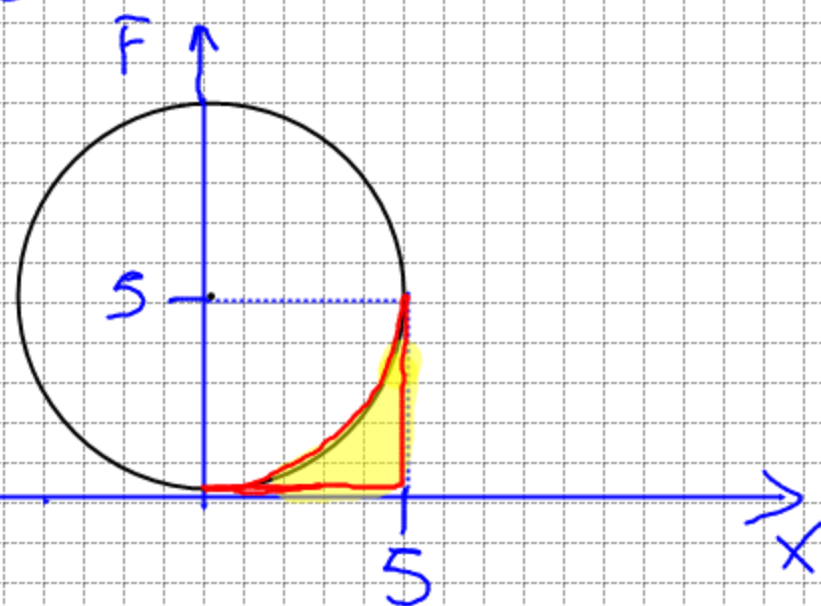
$\bar{F}$  è positivo  $\Rightarrow \bar{F} = m a \Rightarrow a$  è positivo  $\Rightarrow v_2 > v_0$

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$$F = 5 - \sqrt{25 - x^2}$$

da  $x=0\text{m}$  a  $x=5\text{m}$

L'area sotto l'oggetto da  $0\text{m}$  a  $5\text{m}$



$$Q_c = r^2 \pi = 25\pi \text{ J}$$

$$Q_{\frac{1}{4}c} = \frac{Q_c}{4} = \frac{25\pi}{4} \text{ J}$$

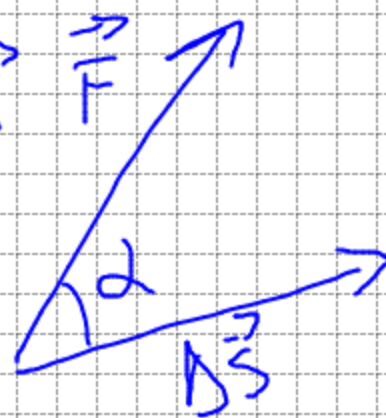
$$Q_q = 25 \text{ J}$$

$$L = Q_q - Q_{\frac{1}{4}c} = 25 \text{ J} - \frac{25\pi}{4} \text{ J} = 5,4 \text{ J}$$

$$L = F s \cos \alpha$$

$$L = \vec{F} \cdot \vec{s}$$

$$K = \frac{1}{2} m v^2$$



$$L = K_f - K_i$$

$$K_f = \frac{1}{2} m v_f^2$$

$$K_i = \frac{1}{2} m v_i^2$$

$$\text{Se } L > 0 \Rightarrow K_f > K_i$$

$$v_f^2 > v_i^2$$

$$v_f > v_i$$