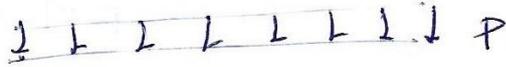
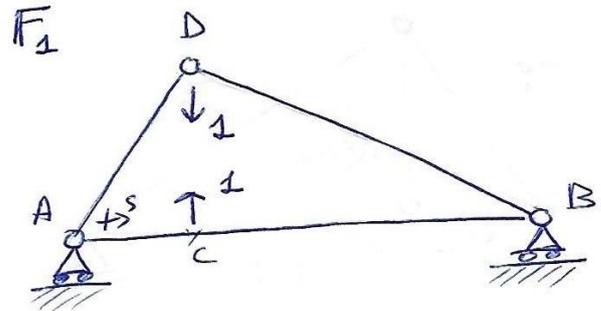
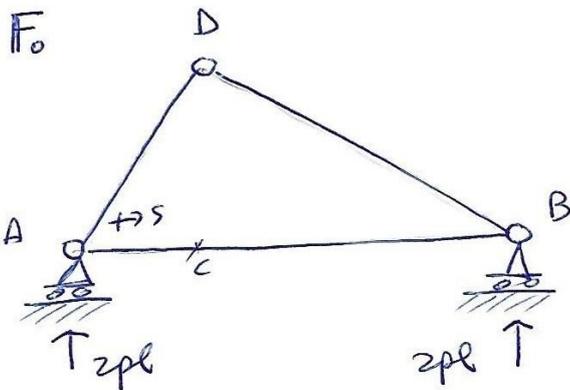


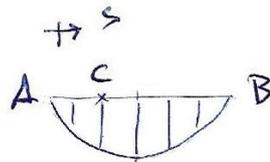
Prova scritta straordinaria del 27 maggio 2020 - Sintesi soluzione



PROBLEMA 1

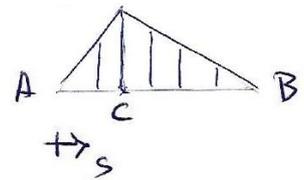


$$M_{AB} = 2pls - ps^2/2$$



$$M_{AC} = -\frac{3}{4}S$$

$$M_{CB} = \frac{S-4l}{4}$$



$$T_{AB} = 2pl - ps$$

$$N_{AD} = 0$$

$$N_{BD} = 0$$

$$T_{AC} = -\frac{3}{4}$$

$$T_{CB} = \frac{1}{4}$$

$$N_{AD} = -\frac{\sqrt{3}}{2}$$

$$N_{BD} = -\frac{1}{2}$$

$$M_{12} = M_{10} + X_2 \cdot M_{11} = -\sqrt{3}l \left(\frac{X_1}{EA} - \varepsilon \right)$$

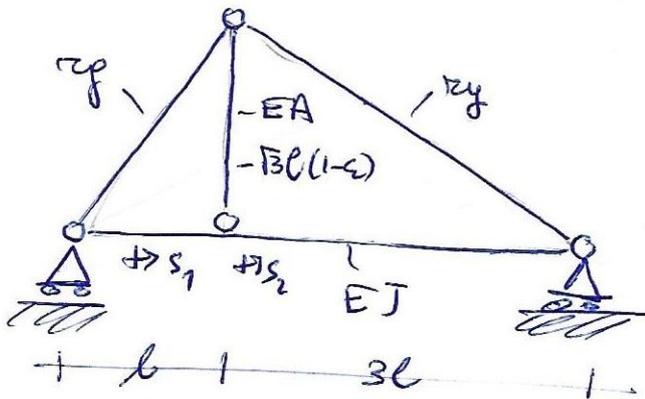
con:

$$M_{10} = -\frac{19}{8} \frac{pl^4}{EJ}$$

$$M_{11} = \frac{l^3}{4EJ} \frac{\sqrt{3}+7}{2}$$

↓↓↓↓↓↓↓↓↓↓↓ ↗

PROBLEMA 2



$$EJ v_1'''' = p$$

$$EJ v_2'''' = p$$

$$v_1(0) = 0$$

$$v_2(0) = v_1(l)$$

$$v_2(3l) = 0$$

$$v_1'(l) = v_2'(0)$$

$$v_1''(0) = 0$$

$$v_1''(l) = v_2''(0)$$

$$v_2''(3l) = 0$$

$$v_2''''(0) - v_1''''(l) + \frac{EA}{EJ} \left(\frac{v_1(l)}{\sqrt{3}l} + \epsilon \right) = 0$$

