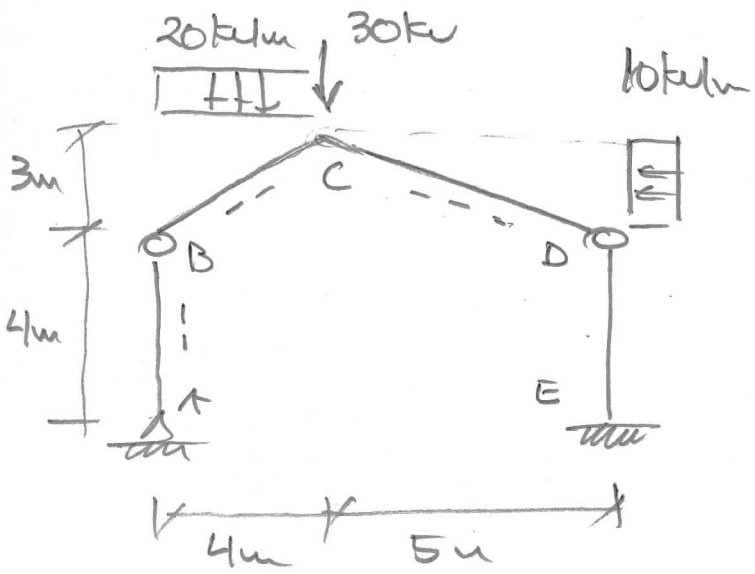
BZTYMA0513

PEDE-SE P/O MEIO DA BARRA BC:

Q01) V

Q02) N

Q03) M

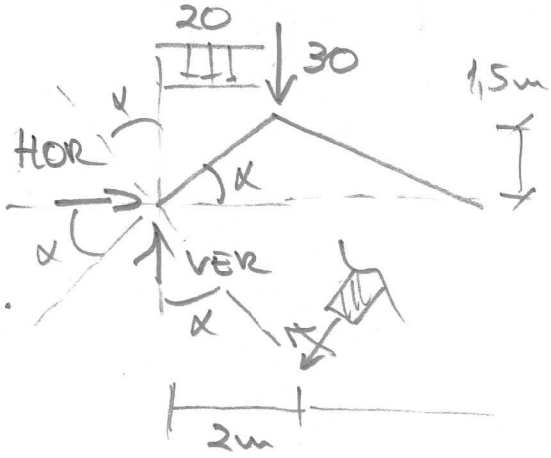


$\Sigma M_B^{\rightarrow A} = 0 \quad \therefore \quad H_A = 0$

$\Sigma M_D = 0$ ↺ (+)

$V_A \times 9 - 20 \times 4 \times (5+2) - 30 \times 5 - 10 \times 3^2/2 = 0$

$V_A = 1/9\,(20 \times 4 \times 7 + 30 \times 5 + 5 \times 9) = 755/9$ kN ↑



$\cos\alpha = 4/5 \qquad \text{sen}\,\alpha = 3/5$

$V_{ER} = 755/9 - 20 \times 2 = 395/9$

$V = V_{ER} \times \cos\alpha - H_{OR} \times \text{sen}\,\alpha$

$V = 395/9 \times 4/5 = +35{,}1111$ kN //

$H_{OR} = 0$

$N = -V_{ER} \times \text{sen}\,\alpha - H_{OR} \times \cos\alpha$

$N = -395/9 \times 3/5 = -26333$ kN //

$M = 755/9 \times 2 - 20 \times 2^2/2 = +127{,}78$ kNm //