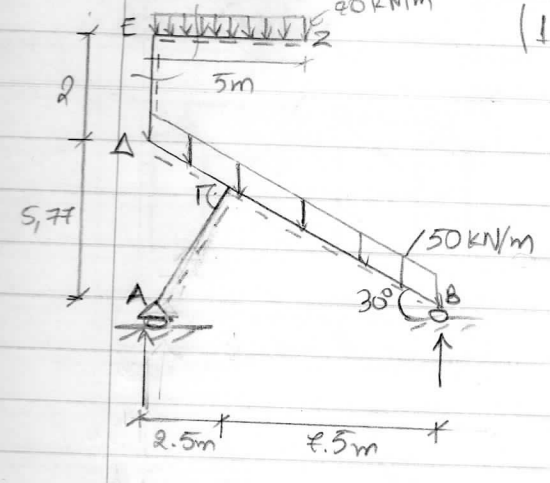
3/4/2009 (Άσκηση 4η)

(1 ώρα το πολύ)



$\Delta\Gamma = 2.89m$

$B\Gamma = 8.66m$ $\rightsquigarrow \Delta B = 11,55$

$\Sigma M_B = \overset{+}{\circlearrowright} 0 = 10 \times V_A - 20 \times 5 \times 7,5 - 50 \times 11,55 \times 5 \rightsquigarrow \boxed{V_A = 363,7\,KN}$

$\Sigma M_A = \overset{+}{\circlearrowright} 0 = -V_B \times 10 + 50 \times 11,55 \times 5 + 20 \times 5 \times 2,5 \rightsquigarrow \boxed{V_B = 313,7\,KN}$

Έλεγχος

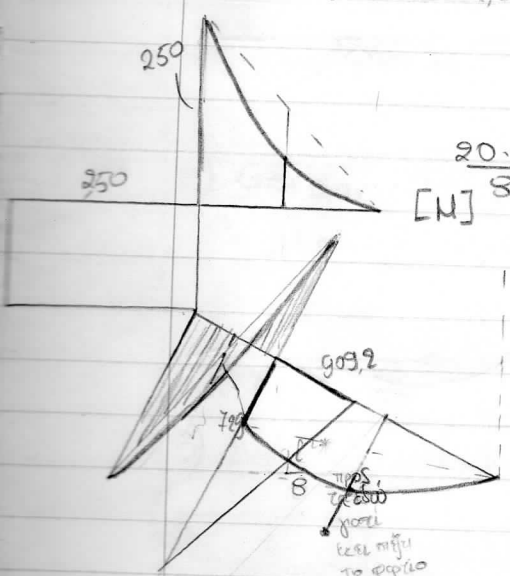
$V_A + V_B = 20 \times 5 + 50 \times 11,55$

$363,7 + 313,7 = 100 + 577,5$

$677,4 = 677,5$ ✓

$M_E = (-)20 \times 5 \times 2,5 = (-)250\,kN$

↳ σύβει πρώτα



$\frac{20 \cdot 5^2}{8} = 62,5\,kNm$

$M_\Gamma^a = -50 \times 2,89 \times 1,25 = -180,40\,kN \cdot m$

$* (50 \times \cos 30) \times \frac{2,84^2}{8}$

$M_\Gamma^k = 363,7 \times 2,5 = 909,2$