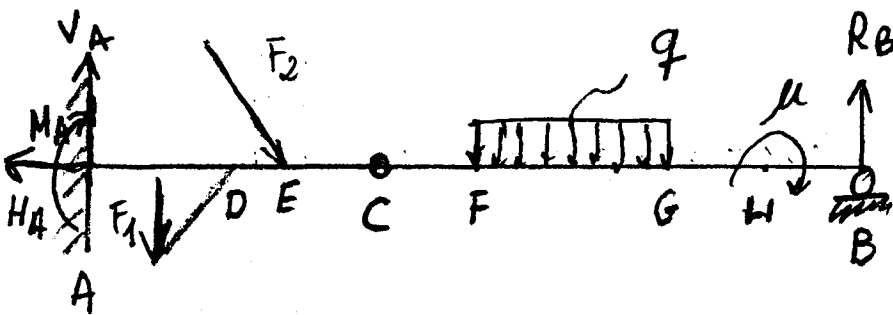


Examen de Resistencia de Materiales I, Plan 76-26.06.03



$$N_A = F_2 \cos 60 = +10 \text{ kN}$$

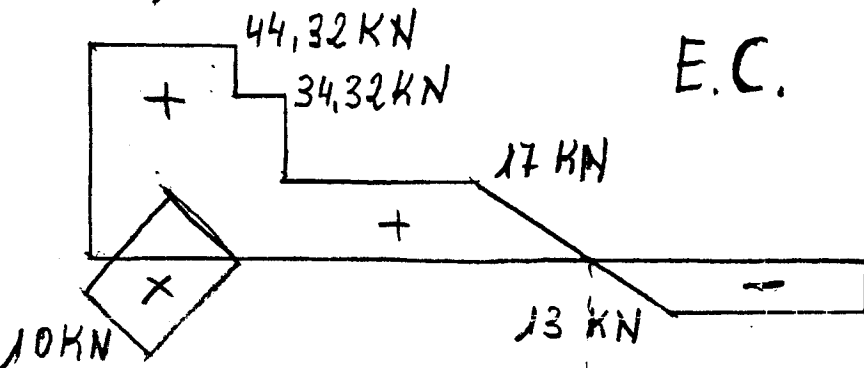
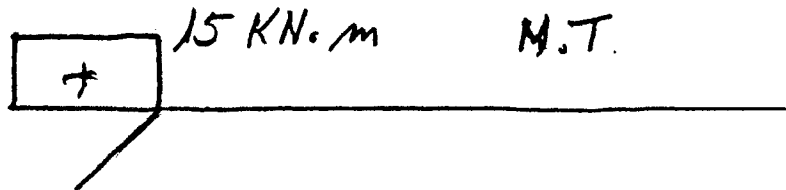
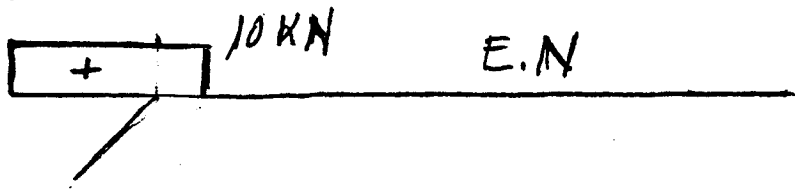
$$M_T = F_1 \times 1.5 = +15 \text{ kN.m}$$

$$R_B \times 5 = \mu + q \cdot 2 \cdot 2 = 5 + 15$$

$$\boxed{R_B = 13 \text{ kN}}$$

$$V_A = F_2 + 10 \cos 60 + F_1 + q \cdot 2 - 13$$

$$\boxed{V_A = 44.32 \text{ kN}}$$



$$C_F = -13 + 15 \cdot 2 = 17 \text{ kN}$$

$$C_E = 17 + 20 \cdot 0.866 = 34.32 \text{ kN}$$

$$M_G = 13 \cdot 2 - 5 = 21 \text{ kN.m}$$

$$M_F = 13 \cdot 4 - 5 - 15 \cdot 2 \cdot 1$$

$$\boxed{M_F = 17 \text{ kN.m}}$$

$$M_D = 13 \times 6.5 - 5 - 30 \times 3.5 - 20 \cdot 0.866 \times 0.1$$

$$\boxed{M_D = -34.16 \text{ kN.m}}$$

$$M_A = 17.32 \times 1 + 10 \times 1.5 - 44.32 \times 3 =$$

$$\boxed{M_A = -100.64 \text{ kN.m}}$$

$$0 = 13 - 15x \rightarrow x = 0.866 \text{ m}$$

$$M_I = 13 \times 2.866 - 5 - 15 \frac{0.866^2}{2} = 26.63$$

$$\boxed{M_I = 26.63 \text{ kN.m}}$$

