

Examen de Resistencia de Materiales 1 y 1º Parcial Plan 76 13-2-04

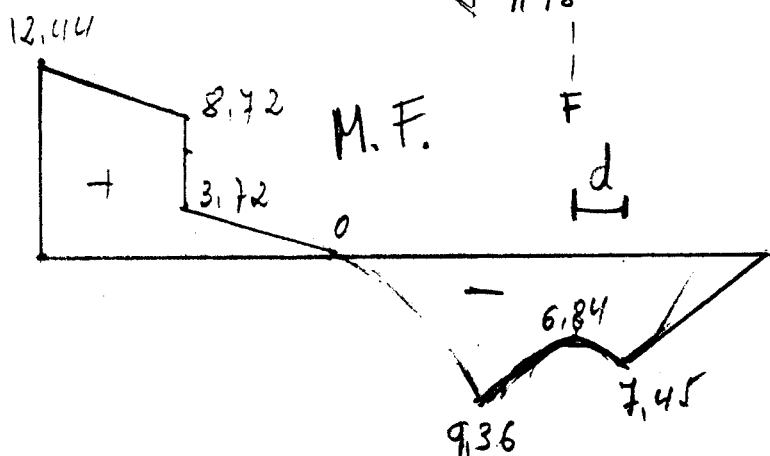
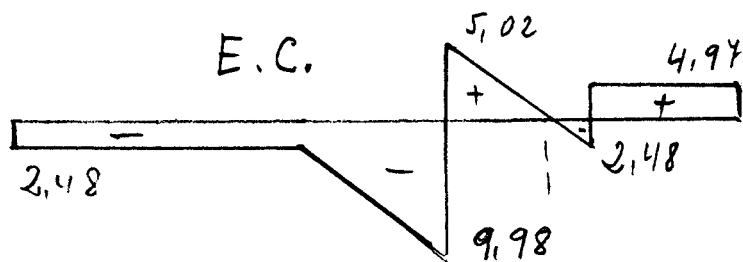
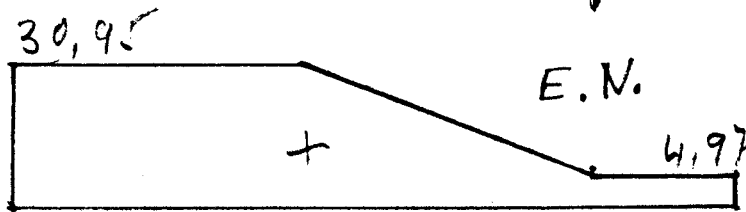
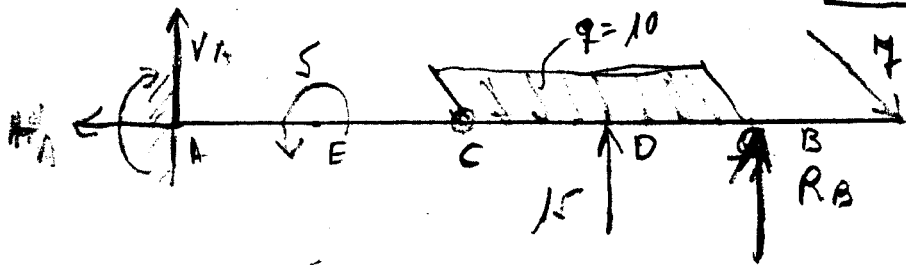
$$M_C = 0; 7 \times 0,71 \times 4,5 + 10 \times 0,5 \times 3 \times 1,5 = 15 \times 1,5 + R_B \times 3$$

$$R_B = 7,45 \text{ kN}$$

$$H_A = 7 \times 0,71 + 10 \times 0,866 \times 3 \rightarrow H_A = 30,95 \text{ kN}$$

$$V_A = 7 \times 0,71 - 7,45 \rightarrow V_A = -2,48 \text{ kN}$$

$$M_C = 0; M_A - 2,48 \times 3 - 5 = 0 \rightarrow M_A = 12,44 \text{ m kN}$$



$$C_B = 4,97 - 7,45 = -2,48 \text{ kN}$$

$$C_D^P = -2,48 + 10 \times 0,5 \times 1,5 = 5,02$$

$$C_D^I = 5,02 - 15 = -9,98 \text{ kN}$$

$$C_C = -9,98 + 10 \times 0,5 \times 1,5$$

$$C_C = -2,48 \text{ kN}$$

$$M_B = -4,97 \times 1,5 = 7,45 \text{ m kN}$$

$$M_D = -4,97 \times 3 + 7,45 \times 1,5 - 5 \times \frac{1,5}{2}$$

$$M_D = -9,36 \text{ m kN}$$

$$M_E^I = 12,44 - 2,48 \times 1,5 = 8,72$$

$$M_E^I = 8,72 \text{ m kN}$$

$$M_E^P = 8,72 - 5 = 3,72 \text{ m kN}$$

$$d = \frac{2,48}{7,5} \times 1,5 = 0,5 \text{ m}$$

$$M_F = -4,97 \times 2 + 7,45 \times 0,5 - 5 \times \frac{0,5^2}{2}$$

$$M_F = -6,84 \text{ m kN}$$