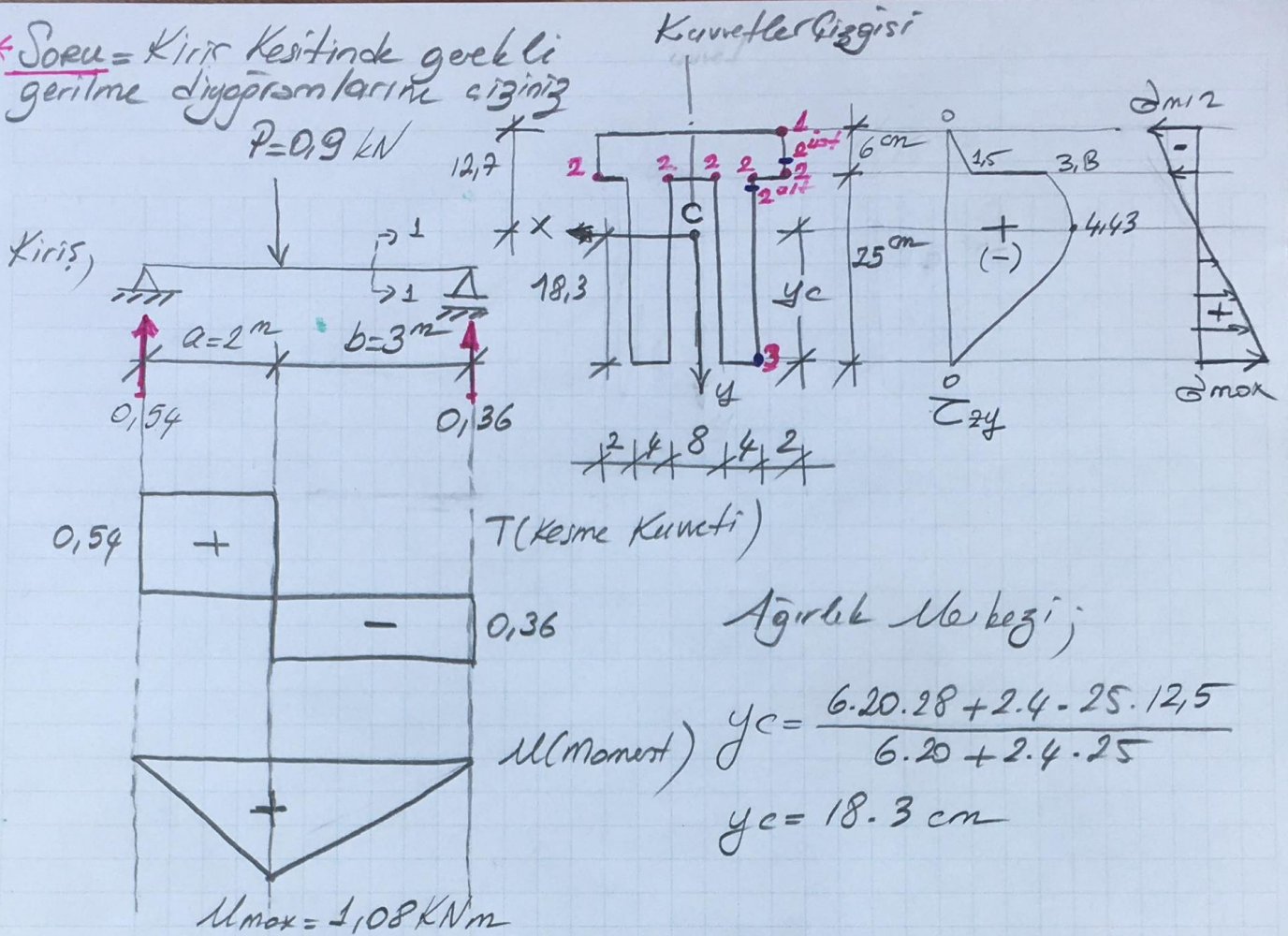


\* Soru = Kiriş kesitinde gerilme dağılımlarının çizilmesi



$$I_x = \frac{20 \cdot 6^3}{12} + 20 \cdot 6 \cdot (28 - 18.3)^2 + 2 \left( \frac{4 \cdot 25^3}{12} + 4 \cdot 25 \cdot (18.3 - 12.5)^2 \right)$$

$$= 20462 \text{ cm}^4$$

$$\tau = \frac{T_y \cdot S_x}{I_x \cdot b_y} \rightarrow \tau_1 = 0 \rightarrow (S_{x1} = 0) \quad \tau_3 = 0$$

(2 noktasının E kadar üstü)

$$\tau_{2 \text{ üst}} = \frac{540 \cdot (20 \cdot 6 \cdot (12.7 - 3))}{20462 \cdot 20} = 1.5 \text{ N/cm}^2$$

(2 noktasının E kadar altı)

$$\tau_{2 \text{ alt}} = \frac{540 \cdot (20 \cdot 6 \cdot (12.7 - 3))}{20462 \cdot (4 + 4)} = 3.8 \text{ N/cm}^2$$

$$= 4.43 \text{ N/cm}^2$$

$$\sigma_z = \frac{M_x \cdot y}{I_x}$$

$$\tau_c = \tau_{\max} = \frac{540 \cdot (20 \cdot 6 \cdot (12.7 - 3)) + 2 \cdot 4 \cdot 6 \cdot 70 \cdot (6.70/2)}{20462 \cdot 8}$$

$$= 4.43 \text{ N/cm}^2$$

$$\sigma_{z,1} = \frac{1.08 \cdot (10^3) \cdot (10^2)}{20462} \cdot (-12.7) = -67 \text{ N/cm}^2 = \sigma_{\min}$$

$$\sigma_{z,3} = \frac{1.08 \cdot (10^3) \cdot (10^2)}{20462} \cdot (18.3) = 96.5 \text{ N/cm}^2 = \sigma_{\max}$$