

$$\sigma_g = \frac{M_{g_{max}}}{J_{z_c}} \quad y_{max}$$

$$\sigma_N = \frac{N}{A}$$

$$\sigma_{zr} = \sqrt{(\sigma_g + \sigma_N)^2 + 3\tau^2} \leq k_r$$

$$\sum F_{ix} = 0 \quad R_{Ax} - Q = 0$$

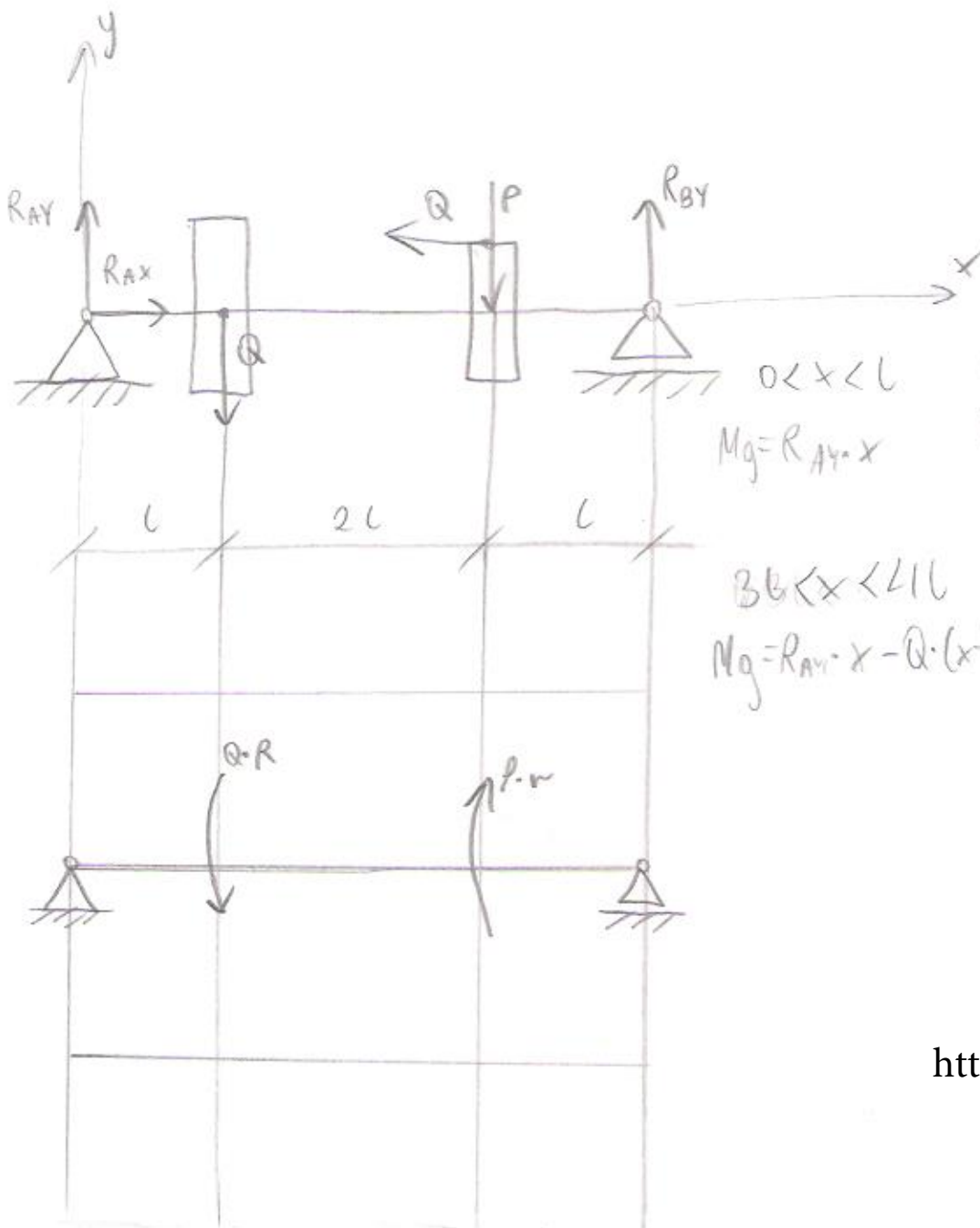
$$\sum F_{iy} = 0 \quad R_{Ay} - Q - P + R_{By} = 0$$

$$\sum F_{iz} = 0 \quad R_{Az} + R_{Bz} = 0$$

$$\sum M_{ix} = 0 \quad Q \cdot R - P \cdot r = 0$$

$$\sum M_{iy} = 0 \quad R_{Bz} \cdot 4l = 0$$

$$\sum M_{iz} = 0 \quad Q \cdot l - Q \cdot r + P \cdot 3l - R_{By} \cdot 4l = 0$$



$$0 < x < l \quad M_g = R_{Ay} \cdot x$$

$$l < x < 3l \quad M_g = R_{Ay} \cdot x - Q \cdot (x - l)$$

$$3l < x < 4l \quad M_g = R_{Ay} \cdot x - Q \cdot (x - l) - Q \cdot r - P \cdot (x - 3l)$$