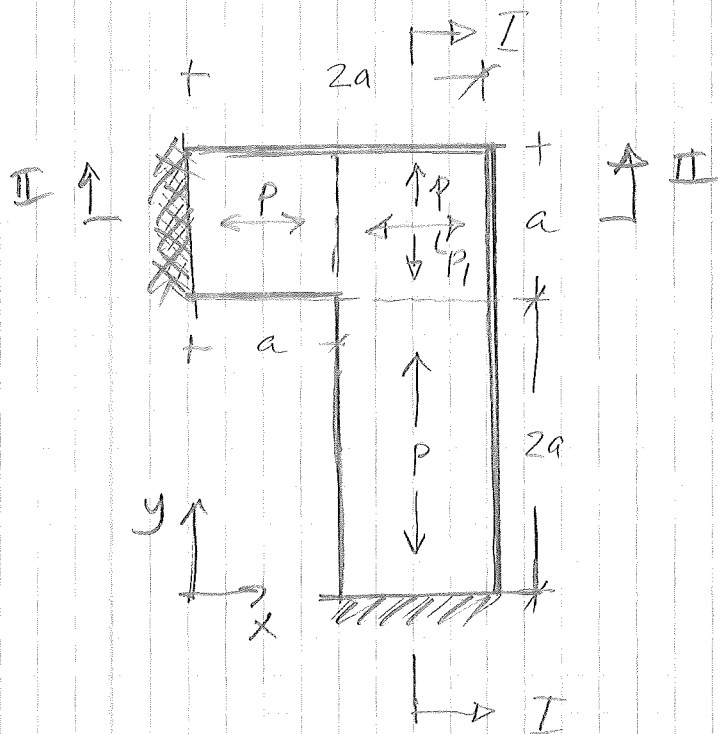
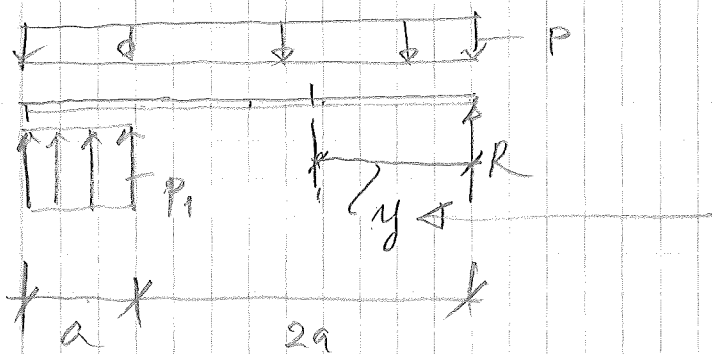




Snit I-I



afstand til
maks. moment

Moment om R's angrebspunkt:

$$P_1 \cdot a \cdot \left(\frac{5}{2}a\right) - P \cdot 3a \cdot \left(\frac{3}{2}a\right) = 0 \Rightarrow$$

$$P_1 = \frac{9}{5}P$$

Moment om resultanten af P_1 :

$$R \cdot \frac{5}{2}a - p \cdot 3a \left(\frac{3}{2}a - \frac{1}{2}a \right) = 0 \Rightarrow$$

$$R = \frac{6}{5}pa$$

Afstanden fra R til snittet med moment maksimum findes ved at kræve beskydningskraften $V = 0$ i snittet.

$$R - p \cdot y = 0 \Rightarrow$$

$$\frac{6}{5}pa - p \cdot y = 0 \Rightarrow$$

$$y = \frac{6}{5}a$$

$$M_{y,max} = R \cdot \frac{6}{5}a - p \frac{6}{5}a \cdot \frac{1}{2} \frac{6}{5}a$$

$$= \frac{1}{2} \left(\frac{6}{5} \right)^2 a^2 p$$

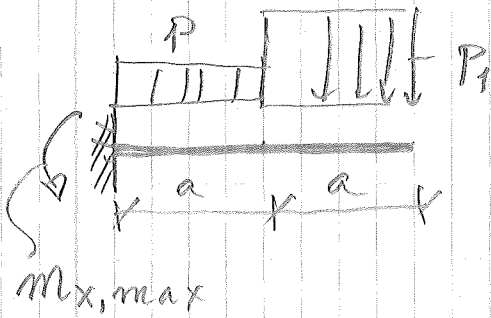
$$= \frac{18}{25} pa^2$$

$$M_{y,max} \leq m_u \Rightarrow$$

$$p \leq \frac{25}{18} \frac{m_u}{a^2}$$

Swot II - II :

3/5



$$M_{x,max} = p \frac{a^2}{2} + P_1 a \cdot \frac{3}{2} a$$

$$= p a^2 \left\{ \frac{1}{2} + \frac{9}{5} \cdot \frac{3}{2} \right\} = \frac{32}{10} p a^2 \quad (\text{hook i overside})$$

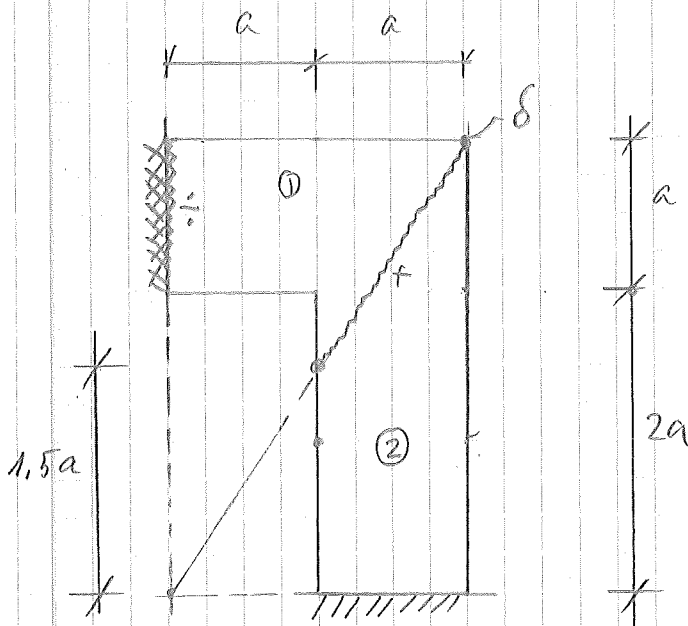
$$M_{x,max} \leq m_u \Rightarrow$$

$$p \leq \frac{10}{32} \frac{m_u}{a^2}$$

Nedre verdi for bærespenn:

$$p_u(-) = \min \left\{ \frac{10}{32} \frac{m_u}{a^2}, \frac{25}{18} \frac{m_u}{a^2} \right\} \rightarrow$$

$$\boxed{p_u(-) = \frac{10}{32} \frac{m_u}{a^2}}$$



$$\left. \begin{aligned} A_i^{(1)} &= (m_u \cdot a + m_u \cdot 1.5a) \frac{\delta}{2a} \\ A_i^{(2)} &= m_u \cdot a \cdot \frac{\delta}{3a} \end{aligned} \right\} \Rightarrow$$

$$A_{i, \text{total}} = \frac{19}{12} \cdot m_u \delta$$

$$\left. \begin{aligned} A_y^{(1)} &= p a^2 \cdot \frac{\delta}{4} + p \left(a \cdot \frac{3}{2} a \cdot \frac{1}{2} \right) \frac{2}{3} \delta \\ A_y^{(2)} &= p \cdot a \cdot \frac{3}{2} a \cdot \frac{1}{4} \delta + p \left(a \cdot \frac{3}{2} a \cdot \frac{1}{2} \right) \cdot \frac{2}{3} \delta \end{aligned} \right\} \Rightarrow$$

$$A_{y, \text{total}} = \frac{13}{8} p a^2 \delta$$

$$A_y = A_i \Rightarrow$$

$$\frac{13}{8} p a^2 \delta = \frac{19}{12} m u \delta \Rightarrow$$

$$p_m^{(+)} = \underline{\underline{\frac{76}{78} \frac{m u}{a^2}}}$$

