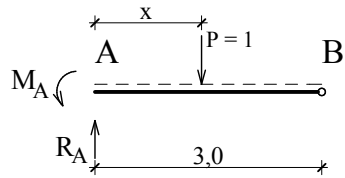


lw M_A lw R_A



$$P \in \langle A; B \rangle$$

$$x \in \langle 0; 3 \rangle$$

$$\sum M_A = 0$$

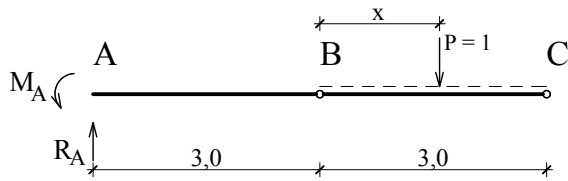
$$M_A = x$$

$$\sum Y = 0$$

$$R_A = 1$$

$$x = 0 \Rightarrow M_A = 0$$

$$x = 3 \Rightarrow M_A = 3$$



$$P \in \langle B; C \rangle$$

$$x \in \langle 0; 3 \rangle$$

$$\sum M_C = 0$$

$$3R_B - P(3-x) = 0$$

$$R_B = 1 - \frac{x}{3}$$

$$\sum M_A = 0$$

$$M_A = 3R_B$$

$$M_A = 3 - x$$

$$\sum Y = 0$$

$$R_A = R_B$$

$$R_A = 1 - \frac{x}{3}$$

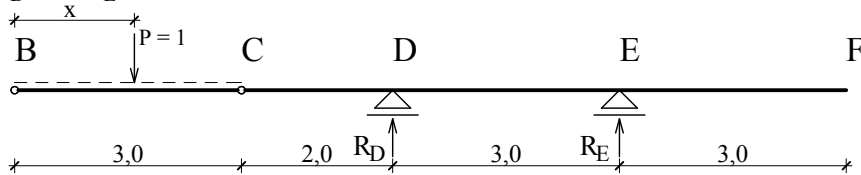
$$x = 0 \Rightarrow M_A = 3$$

$$x = 3 \Rightarrow M_A = 0$$

$$x = 0 \Rightarrow R_A = 1$$

$$x = 3 \Rightarrow R_A = 0$$

lw R_D lw R_E



$$P \in \langle B; C \rangle$$

$$x \in \langle 0; 3 \rangle$$

$$\sum M_B = 0$$

$$Px - 3R_C = 0$$

$$R_C = \frac{x}{3}$$

$$\sum M_E = 0$$

$$-5R_C + 3R_D = 0$$

$$R_D = \frac{5}{9}x$$

$$\sum M_D = 0$$

$$-3R_E - 2R_C = 0$$

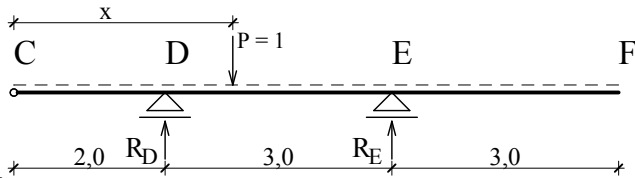
$$R_E = -\frac{2}{9}x$$

$$x = 0 \Rightarrow R_D = 0$$

$$x = 3 \Rightarrow R_D = 1,67$$

$$x = 0 \Rightarrow R_E = 0$$

$$x = 3 \Rightarrow R_E = -0,67$$



$$P \in \langle C; F \rangle$$

$$x \in \langle 0; 8 \rangle$$

$$\sum M_E = 0$$

$$3R_D - P(5-x) = 0$$

$$R_D = \frac{5}{3} - \frac{x}{3}$$

$$x = 0 \Rightarrow R_D = 1,67$$

$$x = 8 \Rightarrow R_D = -1$$

$$\sum M_D = 0$$

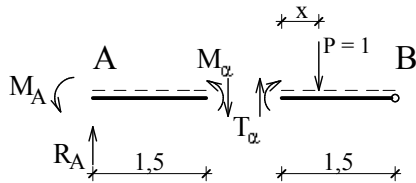
$$-3R_E + P(x-2) = 0$$

$$R_E = \frac{x}{3} - \frac{2}{3}$$

$$x = 0 \Rightarrow R_E = -0,67$$

$$x = 8 \Rightarrow R_E = 2$$

lw T_a lw M_a



$$P \in \langle a; B \rangle$$

$$x \in \langle 0; 1,5 \rangle$$

$$\sum M_a = 0$$

$$M_a = -Px$$

$$x = 0 \Rightarrow M_a = 0$$

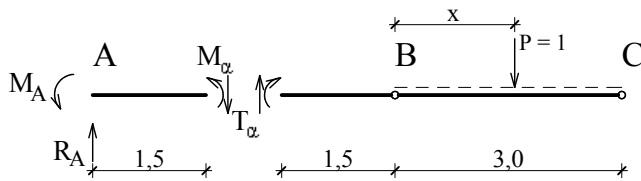
$$x = 1,5 \Rightarrow M_a = -1,5$$

$$\sum Y = 0$$

$$T_a = P$$

$$x = 0 \Rightarrow T_a = 1$$

$$x = 1,5 \Rightarrow T_a = 1$$



$$P \in \langle B; C \rangle$$

$$x \in \langle 0; 3 \rangle$$

$$R_B = 1 - \frac{x}{3}$$

$$\sum M_a = 0$$

$$M_a = -1,5R_B$$

$$M_a = \frac{x}{2} - \frac{3}{2}$$

$$x = 0 \Rightarrow M_a = -1,5$$

$$x = 3 \Rightarrow M_a = 0$$

$$\sum Y = 0$$

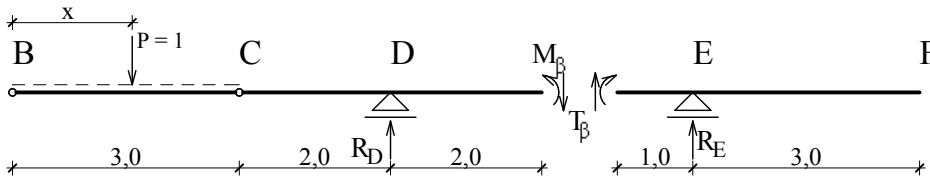
$$T_a = R_B$$

$$T_a = 1 - \frac{x}{3}$$

$$x = 0 \Rightarrow T_a = 1$$

$$x = 3 \Rightarrow T_a = 0$$

lw T_β lw M_β



$P \in \langle B; C \rangle$
 $x \in \langle 0; 3 \rangle$

$$\sum M_B = 0$$

$$Px - 3R_C = 0$$

$$R_C = \frac{x}{3}$$

$$\sum M_b = 0$$

$$M_b = -4R_C + 2R_D$$

$$M_b = -\frac{2}{9}x$$

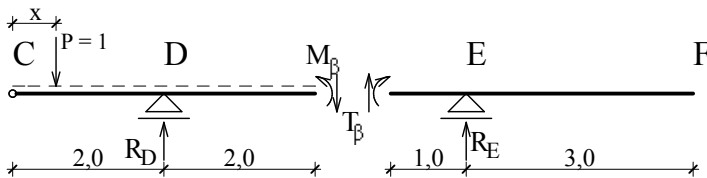
$$\sum Y = 0$$

$$T_b = R_D - R_C$$

$$T_b = \frac{2}{9}x$$

$x = 0 \Rightarrow M_\beta = 0$
 $x = 3 \Rightarrow M_\beta = -0,67$

$x = 0 \Rightarrow T_\beta = 0$
 $x = 3 \Rightarrow T_\beta = 0,67$



$P \in \langle C; b \rangle$
 $x \in \langle 0; 4 \rangle$

$$\sum M_b = 0$$

$$M_b = 2R_D - P(4-x)$$

$$M_b = \frac{x}{3} - \frac{2}{3}$$

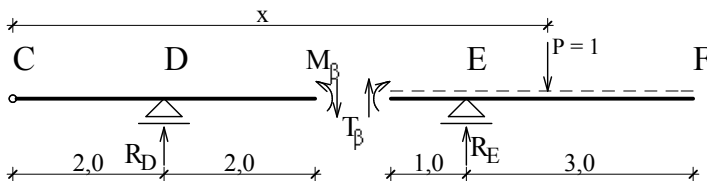
$$\sum Y = 0$$

$$T_b = R_D - P$$

$$T_b = \frac{2}{3} - \frac{x}{3}$$

$x = 0 \Rightarrow M_\beta = -0,67$
 $x = 4 \Rightarrow M_\beta = 0,67$

$x = 0 \Rightarrow T_\beta = 0,67$
 $x = 4 \Rightarrow T_\beta = -0,67$



$P \in \langle b; F \rangle$
 $x \in \langle 4; 8 \rangle$

$$\sum M_b = 0$$

$$M_b + P(x-4) - R_E = 0$$

$$M_b = \frac{10}{3} - \frac{2}{3}x$$

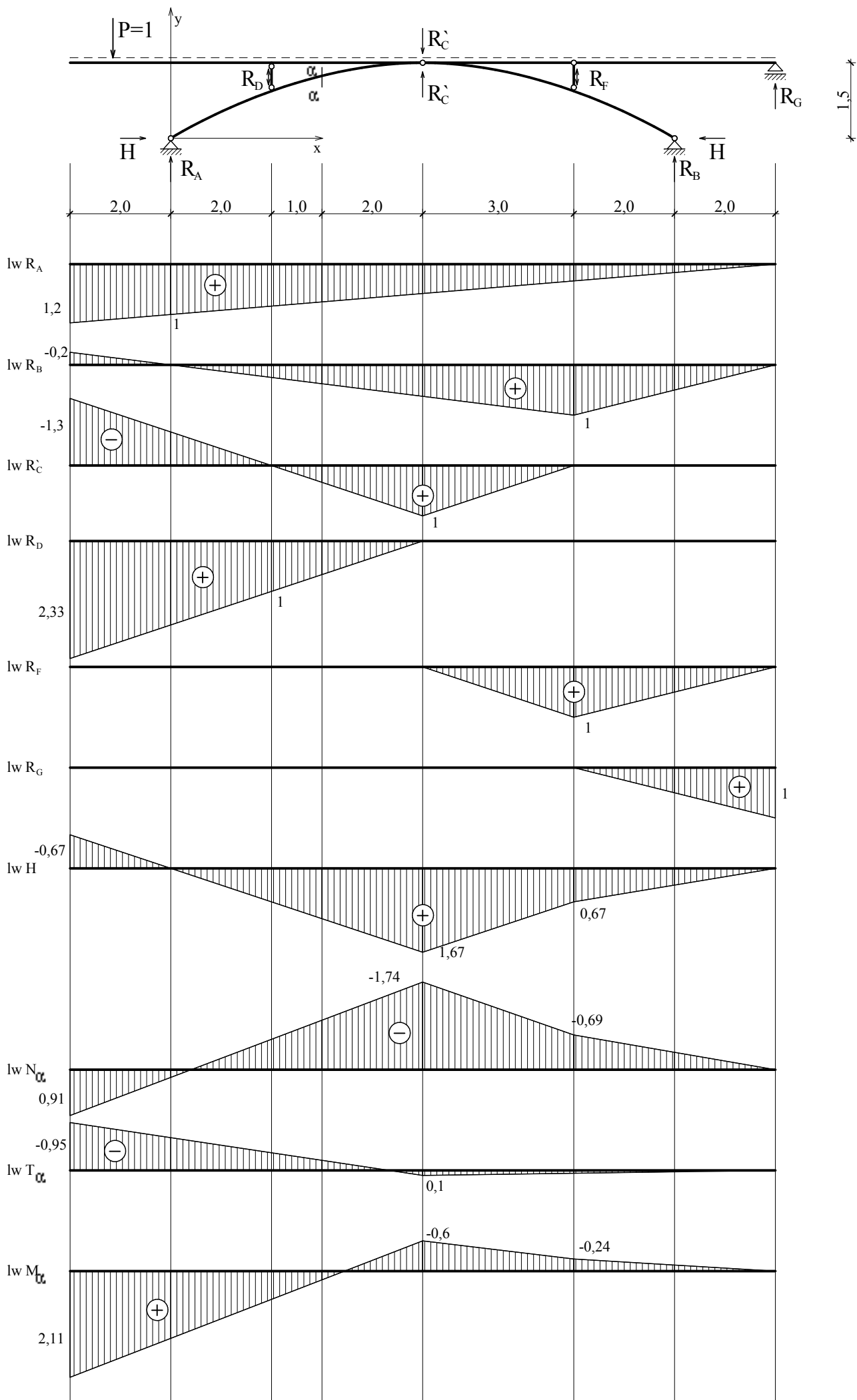
$$\sum Y = 0$$

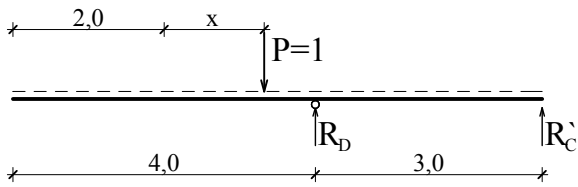
$$T_b + R_E - P = 0$$

$$T_b = \frac{5}{3} - \frac{x}{3}$$

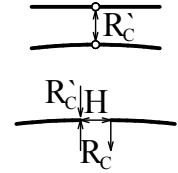
$x = 4 \Rightarrow M_\beta = 0,67$
 $x = 8 \Rightarrow M_\beta = -2$

$x = 4 \Rightarrow T_\beta = 0,33$
 $x = 8 \Rightarrow T_\beta = -1$



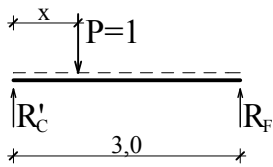


$$x \in \langle -2; 5 \rangle$$



$$\begin{aligned} \sum M_D &= 0 \\ -P(2-x) - 3R'_C &= 0 \\ R'_C &= \frac{x}{3} - \frac{2}{3} \end{aligned}$$

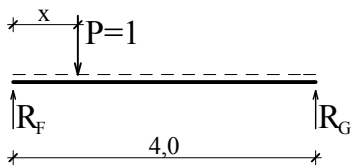
$$\begin{aligned} \sum M_C &= 0 \\ -P(5-x) + 3R_D &= 0 \\ R_D &= \frac{5}{3} - \frac{x}{3} \end{aligned}$$



$$\begin{aligned} P &\in \langle F; G \rangle \\ x &\in \langle 0; 4 \rangle \end{aligned}$$

$$\begin{aligned} \sum M_F &= 0 \\ Px - 4R_G &= 0 \\ R_G &= \frac{x}{4} \end{aligned}$$

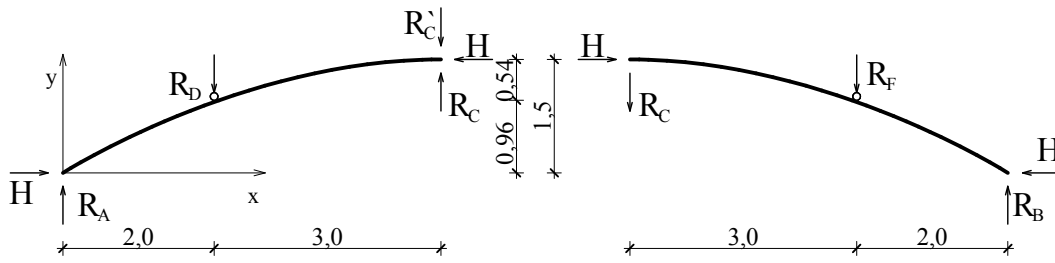
$$\begin{aligned} \sum M_G &= 0 \\ 4R_F - P(4-x) &= 0 \\ R_F &= 1 - \frac{x}{4} \end{aligned}$$



$$\begin{aligned} P &\in \langle C; F \rangle \\ x &\in \langle 0; 3 \rangle \end{aligned}$$

$$\begin{aligned} \sum M_C &= 0 \\ Px - 3R_F &= 0 \\ R_F &= \frac{x}{3} \end{aligned}$$

$$\begin{aligned} \sum M_F &= 0 \\ 3R'_C - P(3-x) &= 0 \\ R'_C &= 1 - \frac{x}{3} \end{aligned}$$



$$\sum M_C^L = 0$$

$$5R_A - 1,5H - 3R_D = 0$$

$$\sum M_A^L = 0$$

$$2R_D + 5R'_C - 5R_C - 1,5H = 0$$

$$\sum M_C^P = 0$$

$$5R_B - 1,5H - 3R_F = 0$$

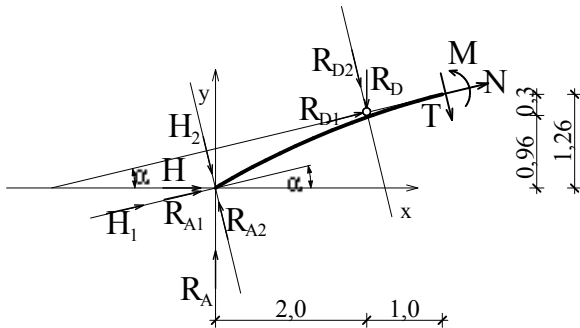
$$\sum M_B^P = 0$$

$$1,5H - 5R_C - 2R_F = 0$$

$$H = \frac{2}{5}R'_C + \frac{2}{3}R_D + \frac{2}{3}R_F$$

$$R_A = \frac{3}{10}H + \frac{6}{10}R_D$$

$$R_B = \frac{3}{10}H + \frac{6}{10}R_F$$



$$\sum X' = 0$$

$$H \cos \alpha + R_A \sin \alpha - R_D \sin \alpha + N = 0$$

$$N = -0,972H - 0,233R_A + 0,233R_D$$

$$\sum Y' = 0$$

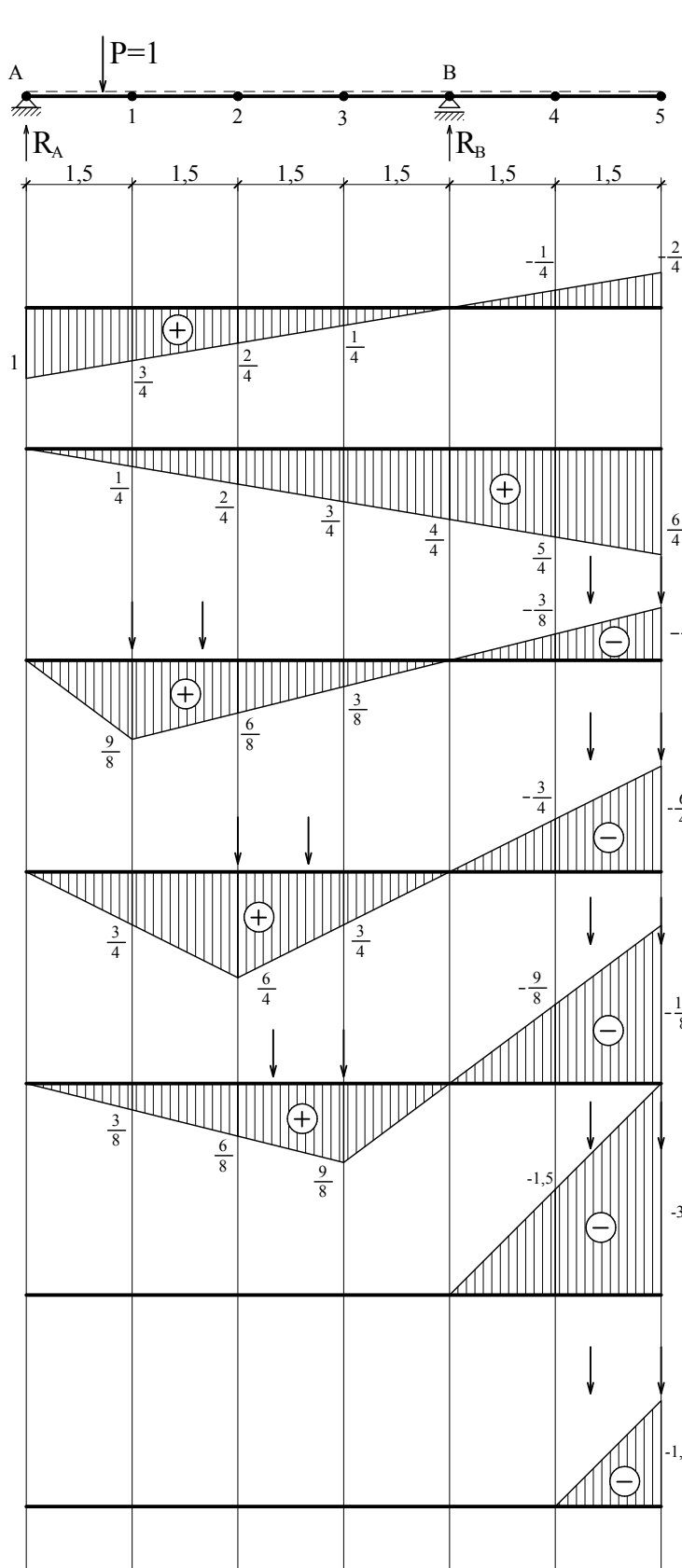
$$-H \sin \alpha + R_A \cos \alpha - R_D \cos \alpha - T = 0$$

$$T = -0,233H + 0,972R_A - 0,972R_D$$

$$\sum M_a = 0$$

$$3R_A - 1,26H - R_D - M_a = 0$$

$$M_a = 3R_A - 1,26H - R_D$$



$$M_1^{\max} = 100 \cdot \frac{9}{8} + 100 \cdot \frac{7}{8} = 200$$

$$M_1^{\min} = 100 \cdot \left(-\frac{4}{8}\right) + 100 \cdot \left(-\frac{6}{8}\right) = -125$$

$$M_2^{\max} = 100 \cdot \frac{6}{4} + 100 \cdot \frac{4}{4} = 250$$

$$M_2^{\min} = 100 \cdot \left(-\frac{6}{4}\right) + 100 \cdot \left(-\frac{4}{4}\right) = -250$$

$$M_3^{\max} = 100 \cdot \frac{7}{8} + 100 \cdot \frac{9}{8} = 200$$

$$M_3^{\min} = 100 \cdot \left(-\frac{12}{8}\right) + 100 \cdot \left(-\frac{18}{8}\right) = -375$$

$$M_B^{\max} = 0$$

$$M_B^{\min} = 100 \cdot (-2) + 100 \cdot (-3) = -500$$

$$M_4^{\max} = 0$$

$$M_4^{\min} = 100 \cdot (-0,5) + 100 \cdot (-1,5) = -200$$

