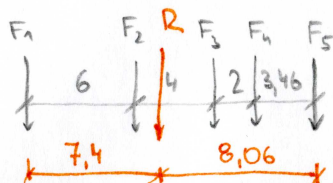
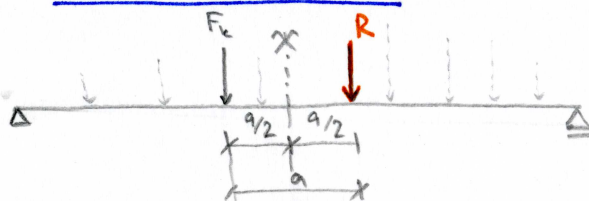
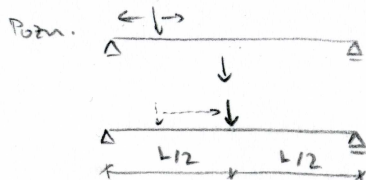


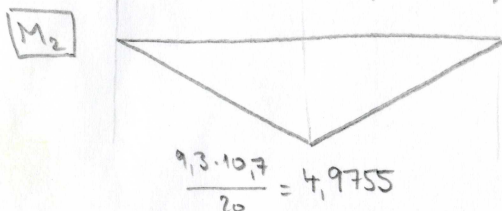
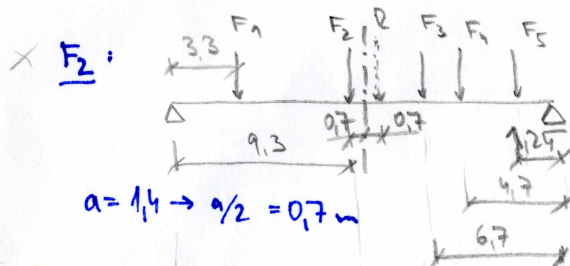
b) max M pod danou silou ... Břemenové kritérium

(5)

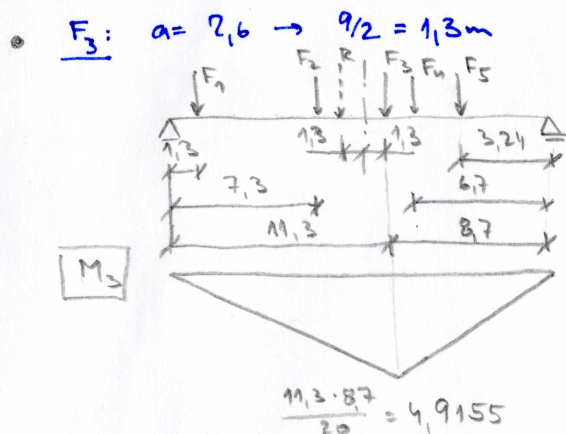


$$\rightarrow R = 200 + 200 + 190 + 100 + 100 = 790 \text{ kN}$$

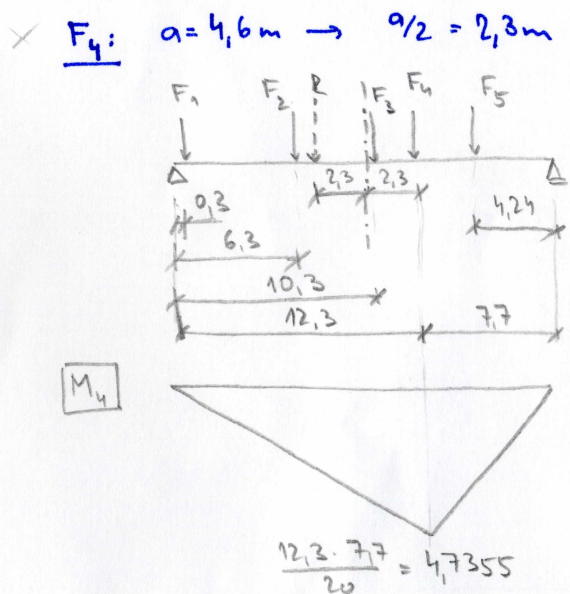
$$x = \frac{200 \cdot 0.6 + 200 \cdot 1.0 + 190 \cdot 1.2 + 100 \cdot 1.546}{790} = 7.4 \text{ m}$$



$$\begin{aligned} \underline{\underline{M_2}} &= \sum_{i=1}^5 F_i \cdot \eta_i = 200 \cdot \frac{4.9755 \cdot 3.3}{9.3} + 200 \cdot 4.9755 + \\ &+ 190 \cdot \frac{4.9755 \cdot 6.7}{10.7} + 100 \cdot \frac{4.9755 \cdot 4.7}{10.7} + 100 \cdot \frac{4.9755 \cdot 1.24}{10.7} = \\ &= \underline{\underline{2216.355 \text{ kNm}}} \quad (2216.132 \div 2216.578) \end{aligned}$$

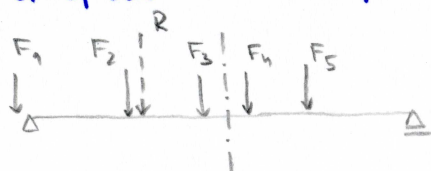


$$\begin{aligned} \underline{\underline{M_3}} &= \sum_{i=1}^5 F_i \cdot \eta_i = 200 \cdot \frac{4.9155 \cdot 1.3}{11.3} + 200 \cdot \frac{4.9155 \cdot 7.3}{11.3} + 190 \cdot 4.9155 + \\ &+ 100 \cdot \frac{4.9155 \cdot 6.7}{8.7} + 100 \cdot \frac{4.9155 \cdot 3.24}{8.7} = \\ &= \underline{\underline{2243.755 \text{ kNm}}} \end{aligned}$$



$$\begin{aligned} \underline{\underline{M_4}} &= \sum_{i=1}^5 F_i \cdot \eta_i = 200 \cdot \frac{4.7355 \cdot 0.3}{12.3} + 200 \cdot \frac{4.7355 \cdot 6.3}{12.3} + \\ &+ 190 \cdot \frac{4.7355 \cdot 10.3}{12.3} + 100 \cdot 4.7355 + 100 \cdot \frac{4.7355 \cdot 4.24}{7.7} = \\ &= \underline{\underline{1995.955 \text{ kNm}}} \end{aligned}$$

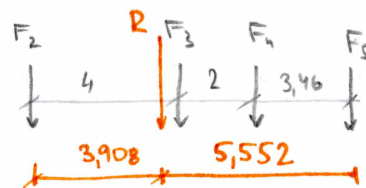
• F₅: $a = 8,06\text{m} \rightarrow q/2 = 4,03\text{m}$



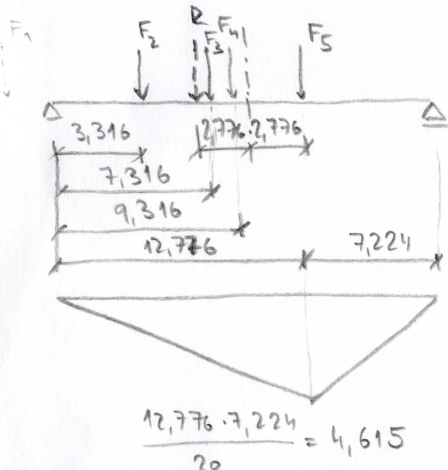
! nutný přepočet výslednice!

$$R_{2-5} = 200 + 190 + 100 + 100 = 590\text{kN}$$

$$x = \frac{190 \cdot 4 + 100 \cdot 6 + 100 \cdot 9,46}{590} = 3,908\text{m}$$



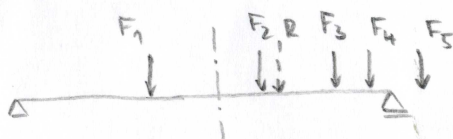
$$a = 5,552\text{m} \rightarrow q/2 = 2,776\text{m}$$



M₅

$$\begin{aligned} \underline{\underline{M_5}} &= 200 \cdot \frac{4,615 \cdot 3,316}{12,776} + 190 \cdot \frac{4,615 \cdot 7,316}{12,776} + 100 \cdot \frac{4,615 \cdot 9,316}{12,776} + \\ &+ 100 \cdot 4,615 = \underline{\underline{1539,696\text{ kNm}}} \end{aligned}$$

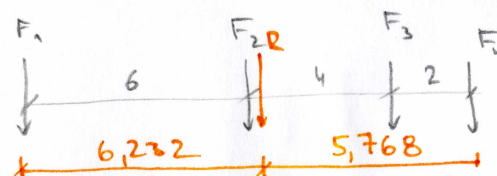
× F₁: $a = 7,4 \rightarrow q/2 = 3,7\text{m}$



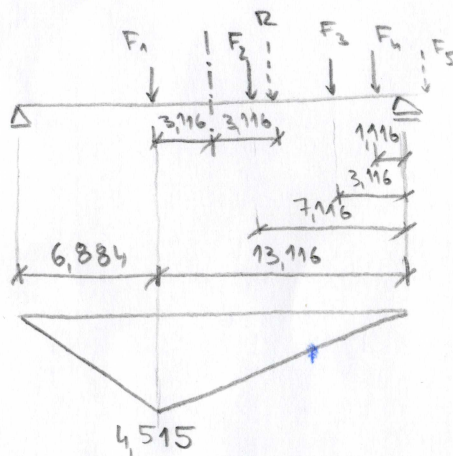
→ přepočet výslednice

$$R_{1-4} = 200 + 200 + 190 + 100 = 690\text{kN}$$

$$x = \frac{200 \cdot 6 + 190 \cdot 10 + 100 \cdot 12}{690} = 6,232\text{m}$$



$$a = 6,232 \rightarrow q/2 = 3,116\text{m}$$



M₁

$$\begin{aligned} \underline{\underline{M_1}} &= 200 \cdot 4,515 + 200 \cdot \frac{4,515 \cdot 3,116}{13,116} + 190 \cdot \frac{4,515 \cdot 7,116}{13,116} + \\ &+ 100 \cdot \frac{4,515 \cdot 1,116}{13,116} = \underline{\underline{1635,135\text{ kNm}}} \end{aligned}$$