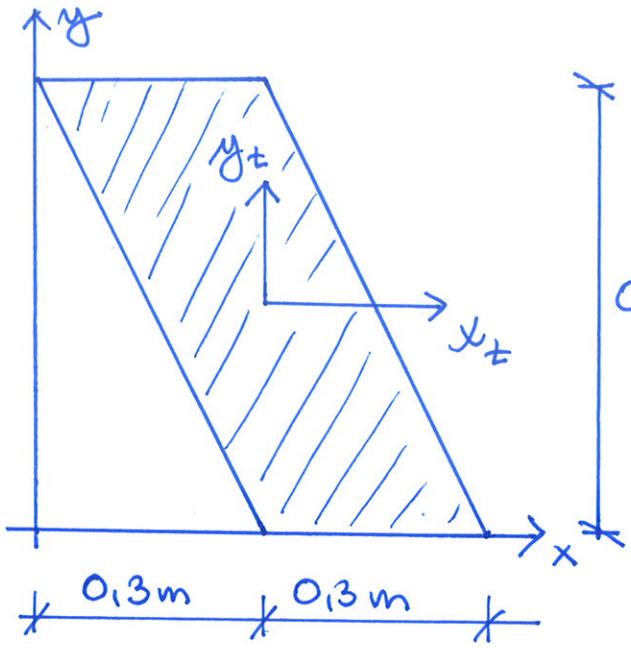
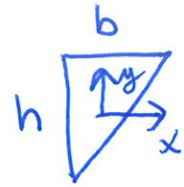
ZADÁNÍ ZKOUŠKY BD001 Č. 4/2020 JE

① 2b



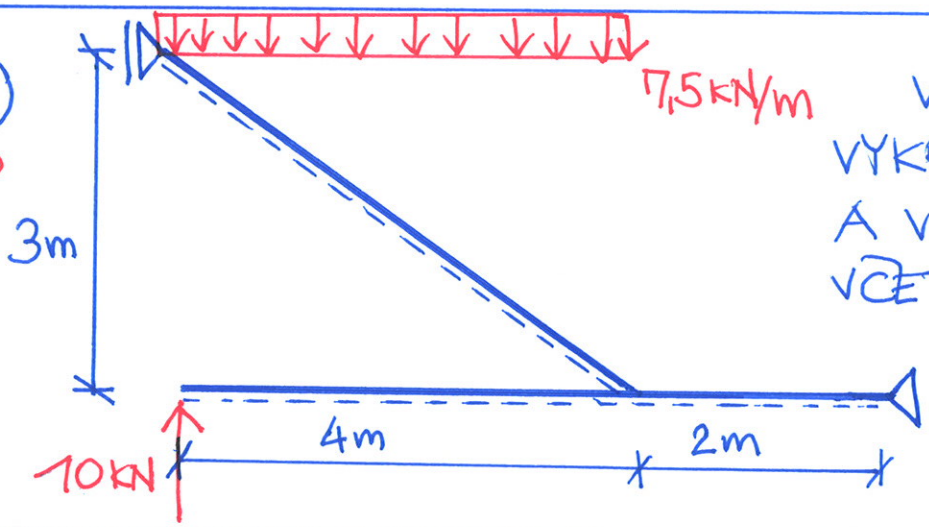
VYPOČTĚTE DEVIAČNÍ MOMENT OBRAZCE K TĚŽIŠTNÍM OSÁM x_t A y_t.

POMŮCKA



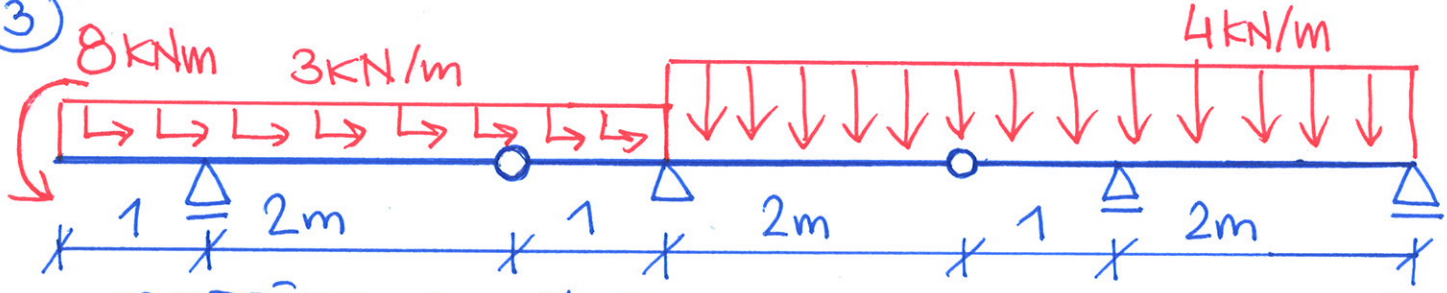
$$D_{xy} = \frac{b^2 h^2}{72}$$

② 3b



VYPOČTĚTE A VYKRESLETE REAKCE A VNITŘNÍ SÍLY VČETNĚ EXTRÉMNÍCH HODNOT MOMENTŮ.

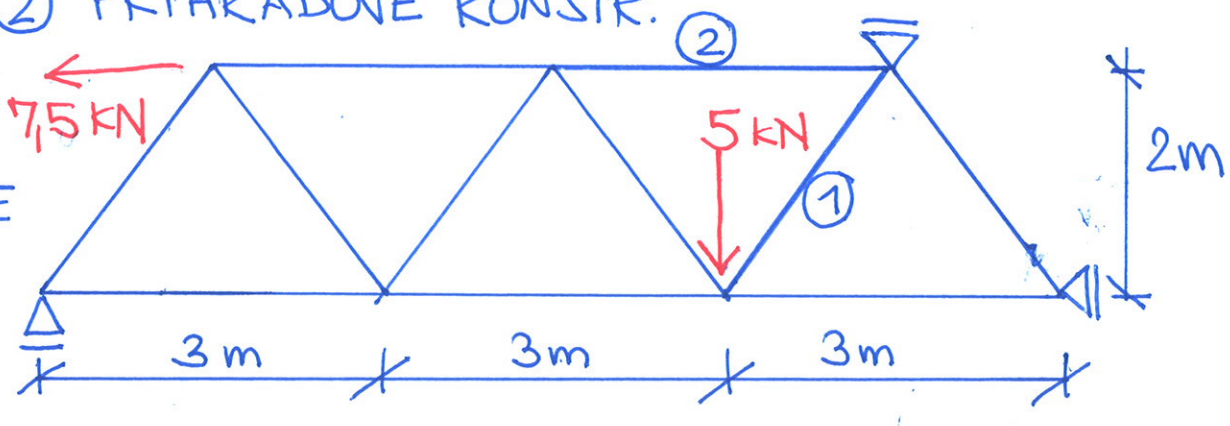
③ 4b



VYPOČTĚTE A VYKRESLETE ..... MOMENTŮ.

④ URČETE NORMÁLOVOU SÍLU V PRUTECH ① A ② PŘÍHRADOVÉ KONSTR. 2b

SLOVNĚ NAPIŠTE, ZDA-LI SE JEDNÁ O TAH ČI TLAK



ŘEŠENÍ Č. 4/2020 JE

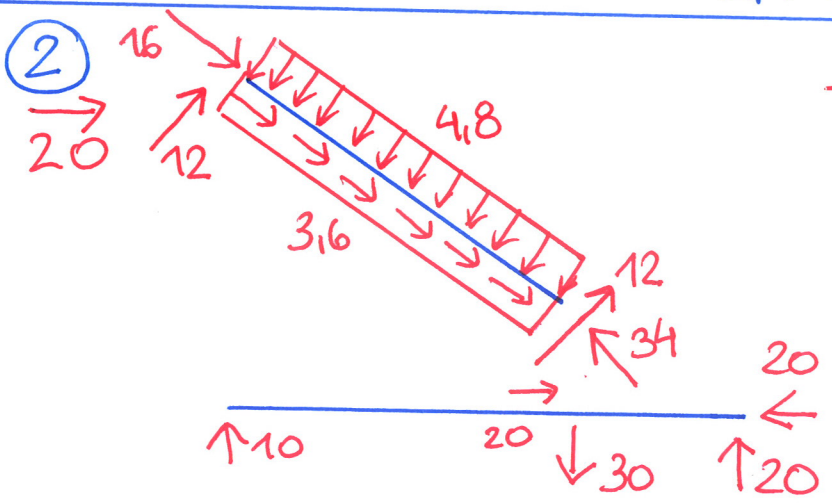
$$y_t = \frac{A_1 \cdot 0{,}2 + A_2 \cdot 0{,}4}{A} = 0{,}3\,m \qquad A_1 = A_2 = 0{,}3 \cdot 0{,}6/2 = 0{,}09\,m^2$$

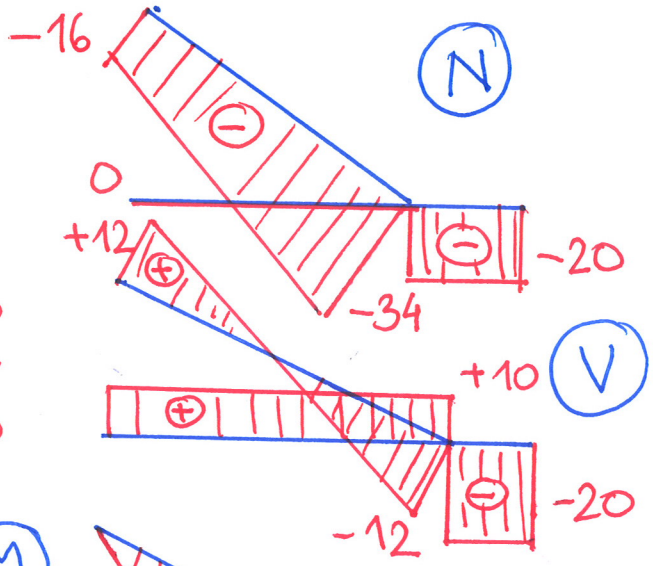
$$y_t = \frac{A_1 \cdot 0{,}4 + A_2 \cdot 0{,}2}{A} = 0{,}3\,m \qquad A = 0{,}18\,m^2$$

①

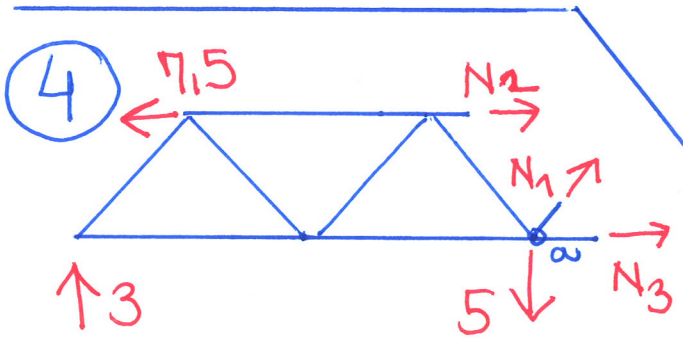
$$D_{x_t y_t} = 2\left(-\frac{0{,}3^2 0{,}6^2}{72}\right) + 0{,}09(0{,}2-0{,}3)(0{,}4-0{,}3) + 0{,}09(0{,}4-0{,}3)(0{,}2-0{,}3) = -2{,}7 \cdot 10^{-3}\,m^4$$

②

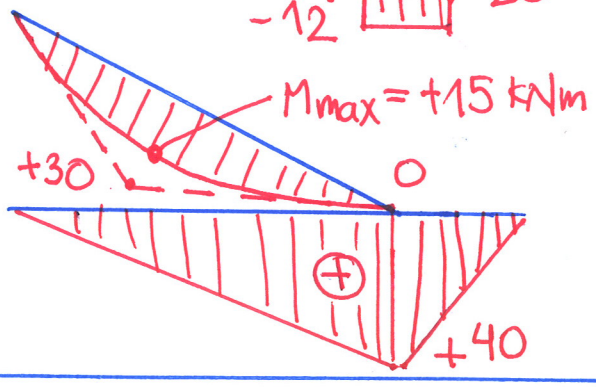




④



M



$$\sum M^{\omega} = 0$$

$$7{,}5 \cdot 2 - 3 \cdot 6 - N_2 \cdot 2 = 0$$

$$N_2 = -1{,}5\,kN$$

TLAK

$$\sum F_y = 0$$

$$0{,}8\,N_{N1} = 5 - 3$$

$$N_1 = 2{,}5\,kN$$

TAH

③

