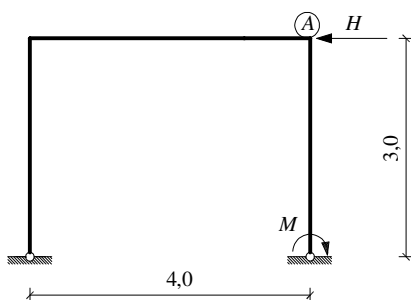


## GS 1. – 2. popravni kolokvij (A) (2011./2012.)

1. (35) Izračunajte horizontalni pomak točke A.

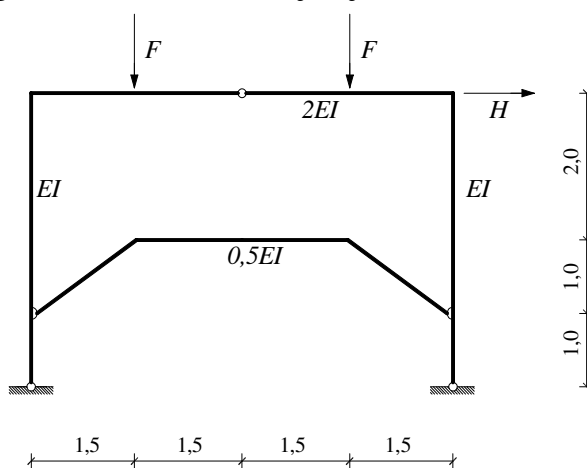


$$EI = 165000 \text{ kNm}^2$$

$$M = 100 \text{ kNm}$$

$$H = 100 \text{ kN}$$

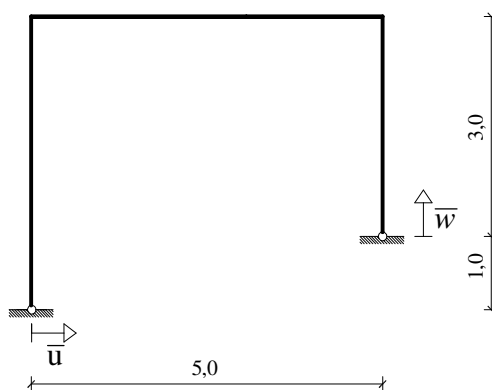
2. (25) Nacrtajte dijagram  $M$ . (Zanemarite utjecaj uzdužnih sila)



$$H = 75 \text{ kN}$$

$$F = 100 \text{ kN}$$

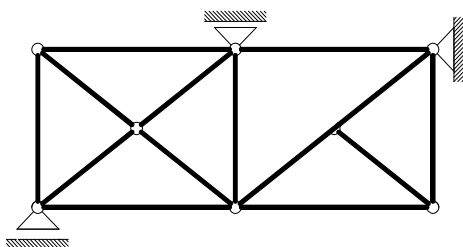
3. (25) Nacrtajte dijagram momenta savijanja.



$$EI = 150000 \text{ kNm}^2$$

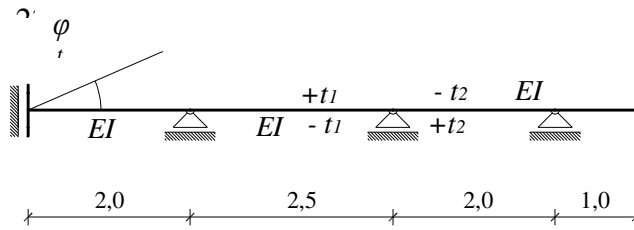
$$\bar{u} = \bar{w} = 1 \text{ cm}$$

4. (15) Odredite stupanj statičke neodređenosti i nacrtajte dva osnovna sistema.



## GS 1. – 2. popravni kolokvij (B) (2011./2012.)

1. (40) Nacrtajte  $M$  dijagram.



$$E = 3 \cdot 10^7 \text{ kN/m}^2$$

$$b/h = 35/60 \text{ cm}$$

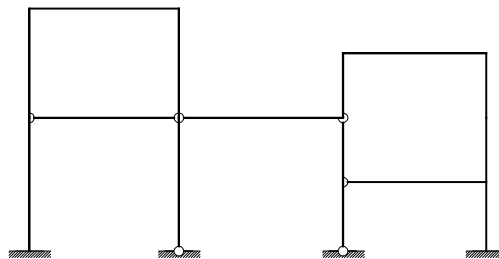
$$\alpha_t = 10^{-5} \text{ K}^{-1}$$

$$\Delta\varphi = 0,002$$

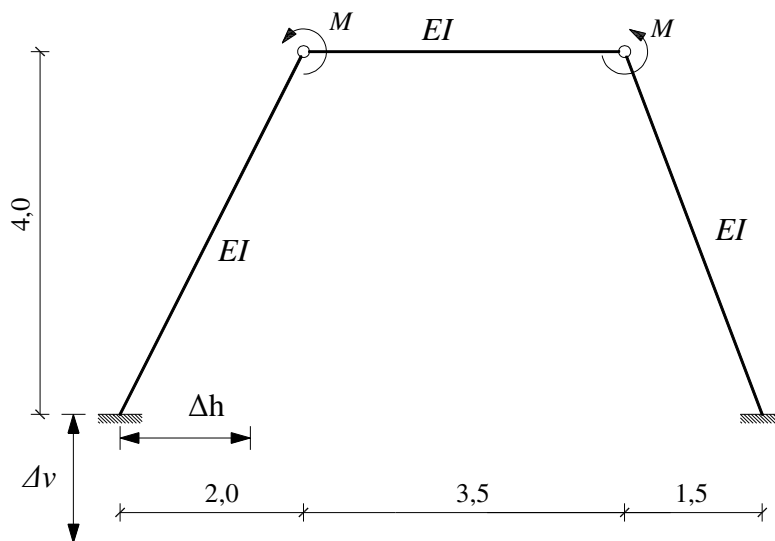
$$t_1 = 12^\circ \text{ C}$$

$$t_2 = 22^\circ \text{ C}$$

2. (15) Odredite stupanj statičke neodređenosti.



3. (45) Nacrtajte  $M$ ,  $T$  i  $N$  dijagrame.



$$M = 260 \text{ kNm}$$

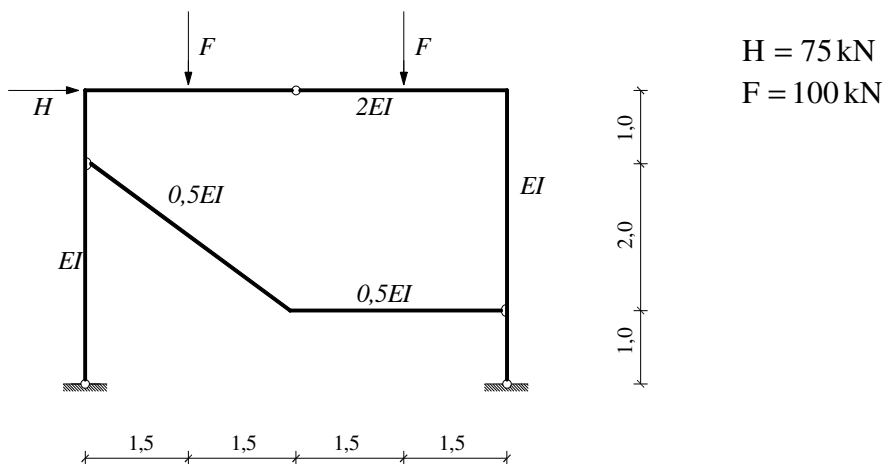
$$EI = 150\,000 \text{ kNm}^2$$

$$\Delta v = 2 \text{ cm}$$

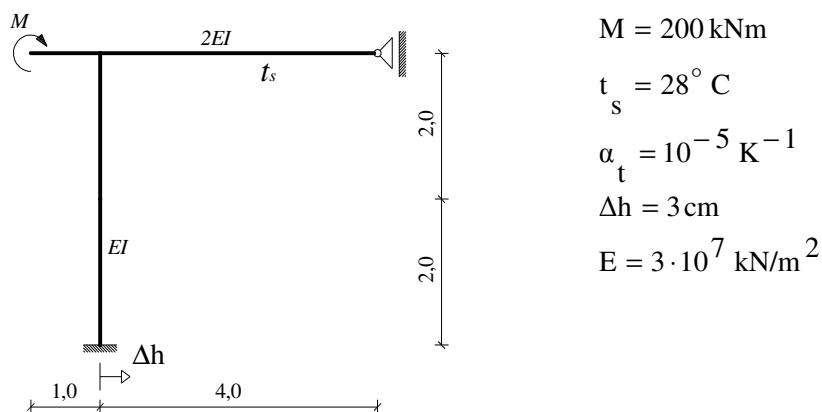
$$\Delta h = 1 \text{ cm}$$

## GS 1. - 2. kolokvij za oslobodenje (A) – (2011./2012.)

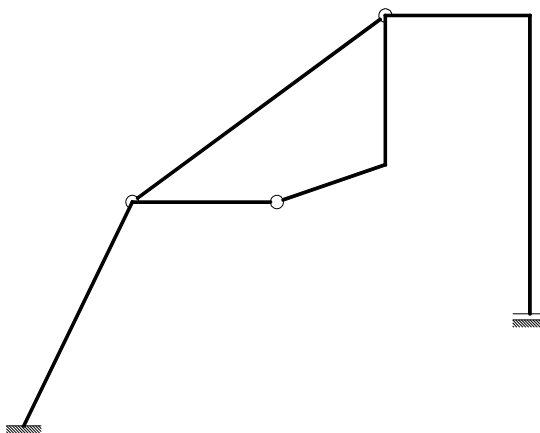
5. (35) Nacrtajte dijagram  $M$ . (Zanemarite utjecaj uzdužnih sila)



6. (35) Odredite pomak kliznog ležaja.



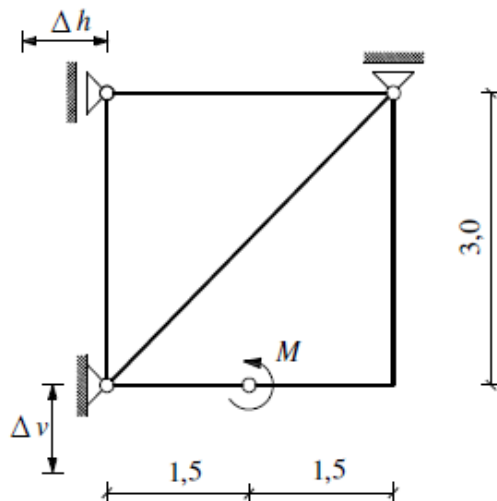
7. (15) Odredite stupanj statičke neodređenosti i nacrtajte dva osnovna sistema s označenim nepoznatim silama i(li) momentima.



8. (15) Nacrtajte plan pomaka za vertikalni prisilni pomak upetog kliznog ležaja iz prethodnog zadatka. Osnovni sustav odaberite tako da vertikalna reakcija u tom ležaju nije nepoznanica.

## GS 1. - 2. kolokvij za oslobodjenje (B) – (2011./2012.)

1. (30) Nacrtajte  $M$  dijagram.



$$M = 100 \text{ kNm}$$

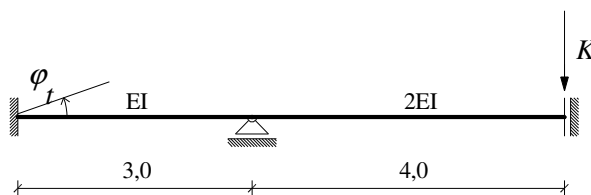
$$\Delta v = 2,5 \text{ cm}$$

$$\Delta h = 3,0 \text{ cm}$$

$$b/h = 25/45 \text{ cm}$$

$$E = 3 \times 10^7 \text{ kN/m}^2$$

2. (35) Odredite pomak upeto kliznog ležaja.



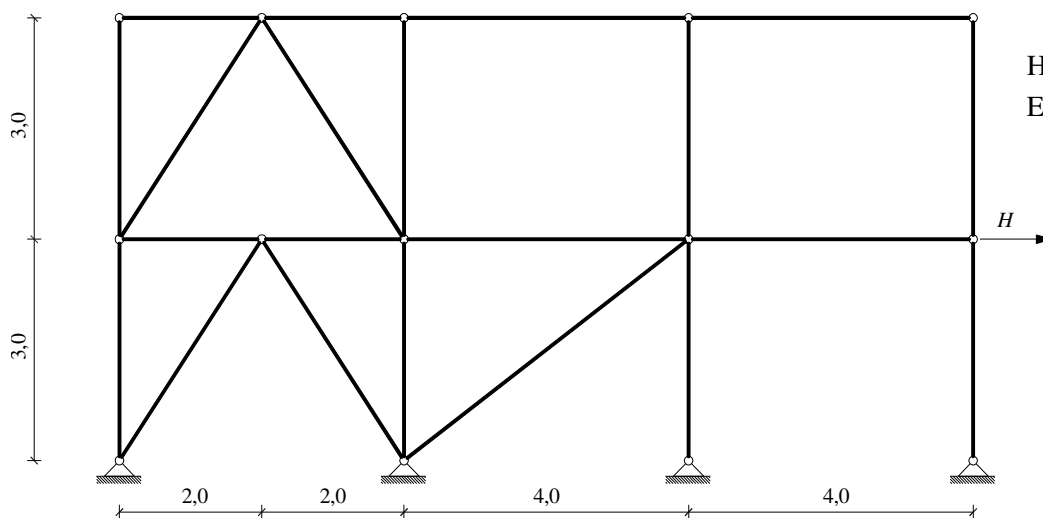
$$E = 3 \cdot 10^7 \text{ kN/m}^2$$

$$K = 100 \text{ kN}$$

$$\varphi_t = 0,0001 \text{ rad}$$

$$\frac{b}{h} = \frac{30}{40} \text{ cm}$$

3. (35) Odredite sile u štapovima.



$$H = 100 \text{ kN}$$

$$EA = 1000000 \text{ kN}$$