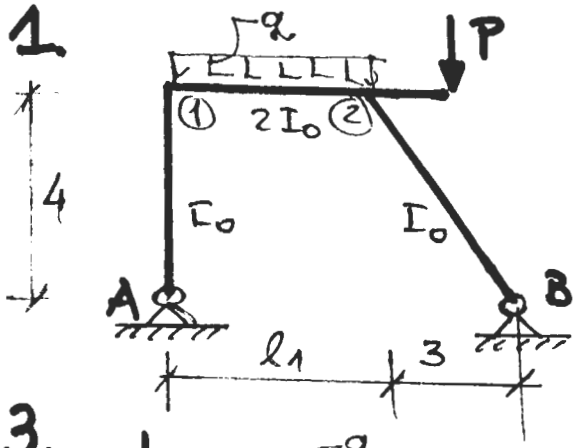
METODA FORȚELOR (EFORTURILOR) Grupa 32301

1.



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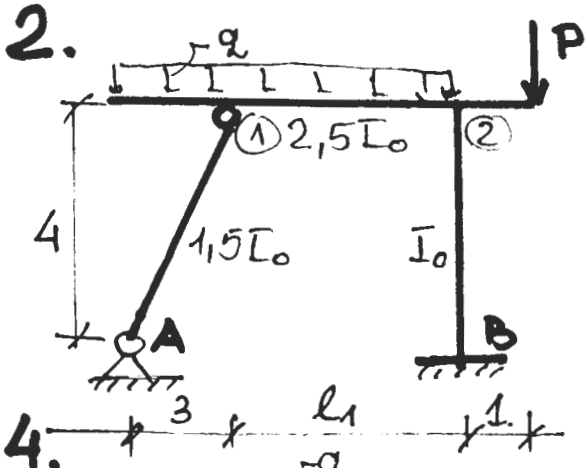

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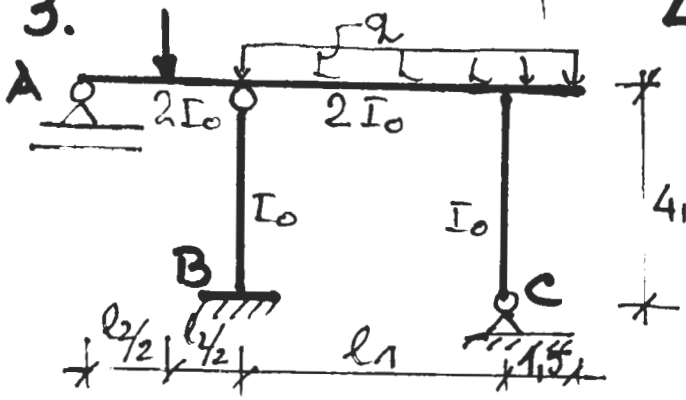

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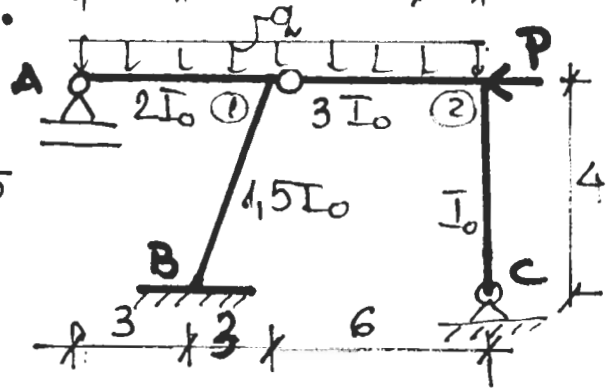

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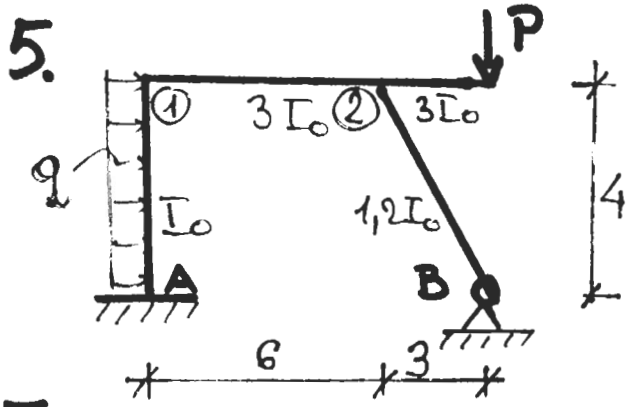
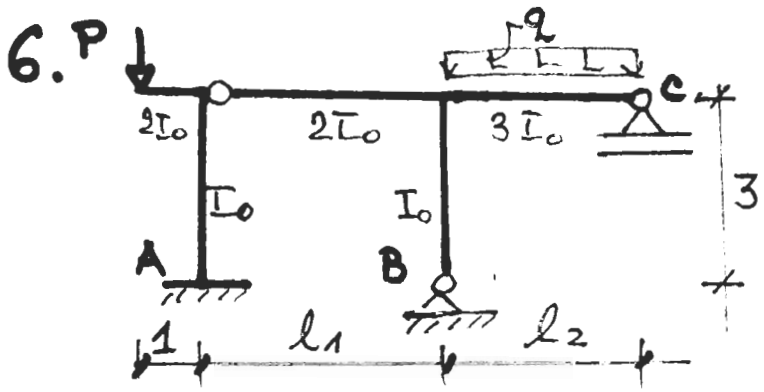


6.



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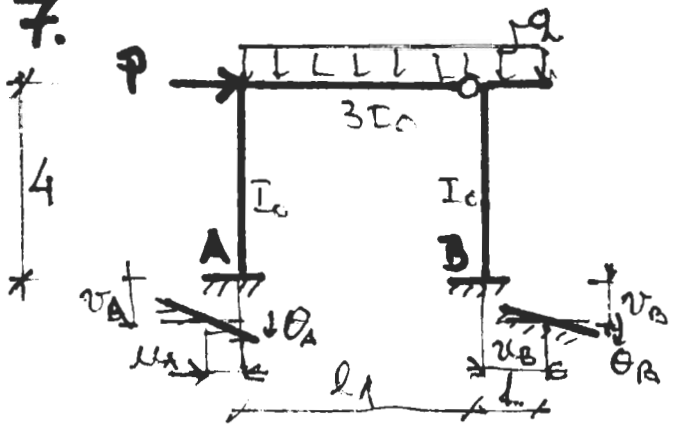
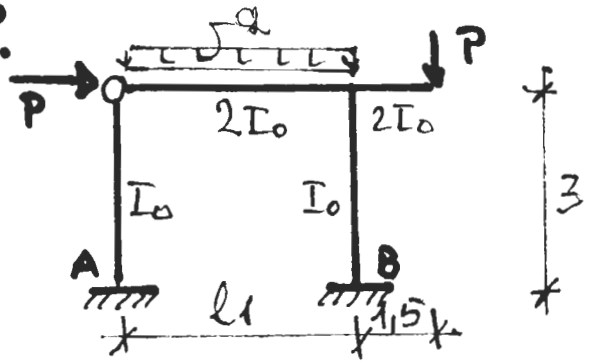


8.



$n = 1 \div 5$: $v_A = 0{,}2n$ (cm); $\theta_A = 0{,}1n^\circ$
$n = 6 \div 10$: $u_A = 0{,}1n$ (cm) $\theta_A = 0{,}05n^\circ$
$n = 11 \div 15$: $v_A = 0{,}05n$ (cm) $\theta_B = 0{,}04n^\circ$
$n = 16 \div 20$: $v_B = 0{,}04n$ (cm) $\theta_B = 0{,}04n^\circ$
$n = 21 \div 25$: $u_B = 0{,}03n$ (cm) $\theta_B = 0{,}02n^\circ$
$n > 25$ $v_B = 0{,}02n$ (cm) $\theta_A = 0{,}02n^\circ$

$P = 10 + n$ (kN)
$q = 6 + 0{,}5n$ (kN/m)
$l_1 = 3 + 0{,}2n$ (m)
$l_2 = 2 + 0{,}1n$ (m)

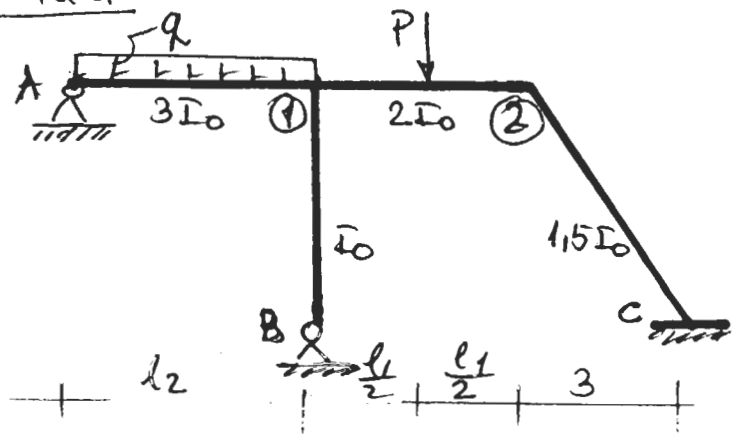
Notă: n este numărul de ordine din grupă

METODA DEPLASĂRILOR

32301

A. clasic

9.



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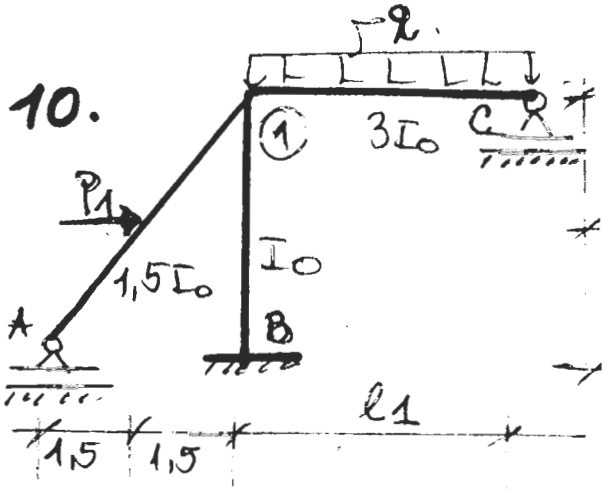
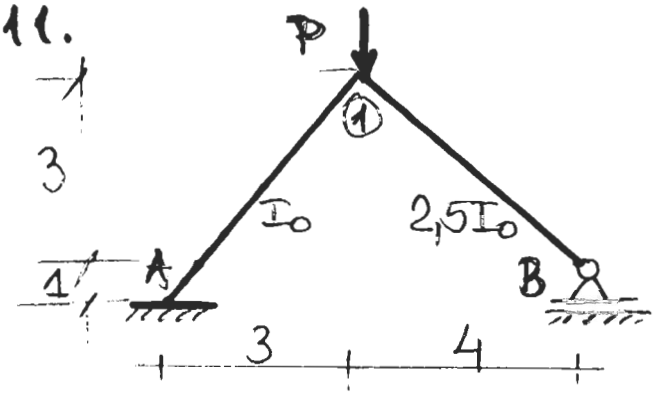
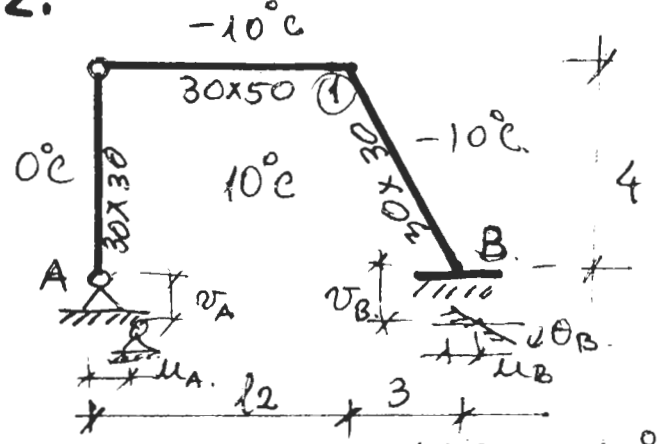


11.



12.



$n = 1 \div 10$: $v_B = 0{,}5 + 0{,}05n$ (cm) $\theta_B = 0{,}1n°$

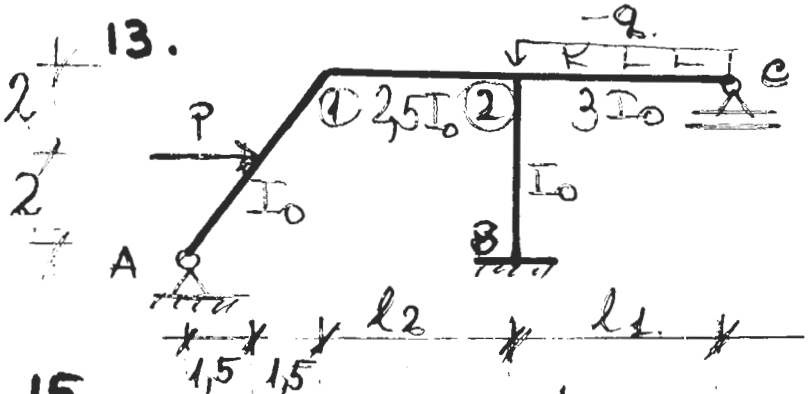
$n = 11 \div 20$ $v_A = 9{,}05n$ (cm) $\theta_B = 0{,}05n°$

$n = 21 \div 30$ $u_A = 0{,}02n$ (cm) $\theta_B = 0{,}02n°$

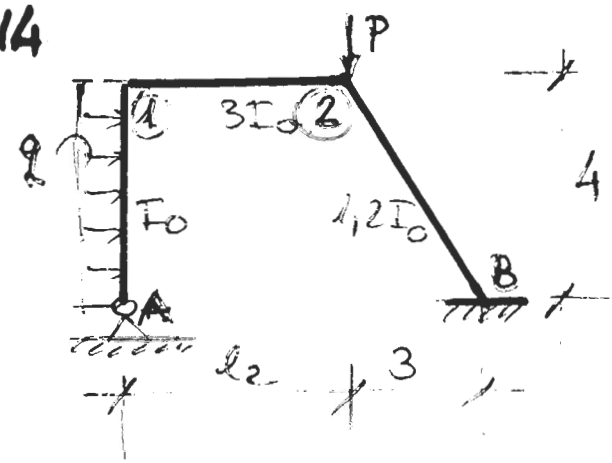
$n > 30$ $v_A = 0{,}02n$ (cm) $u_B = 9{,}03n$ (c

B. Iterativ în două etape (Metoda Cross)

13.



14



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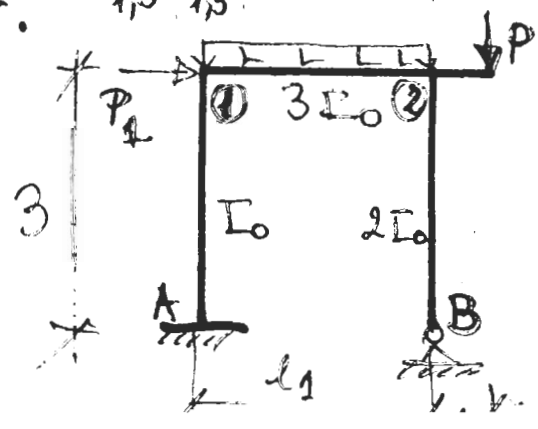
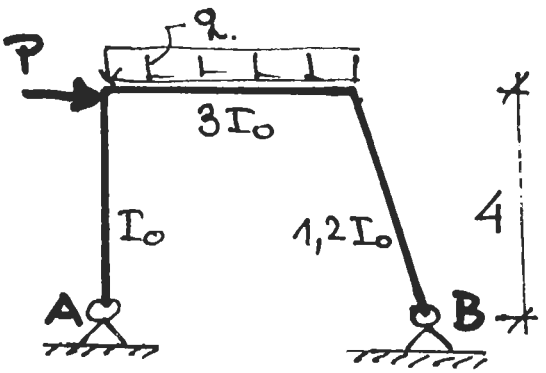


Metoda Forțelor (eforturilor) grupa 32302

1.



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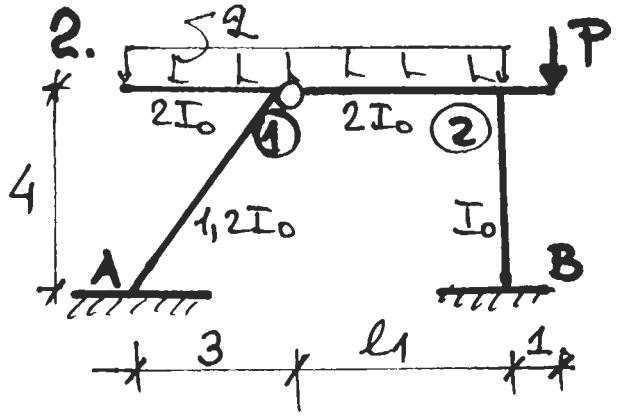

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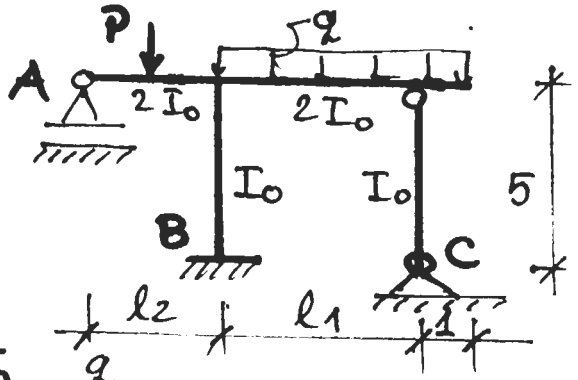

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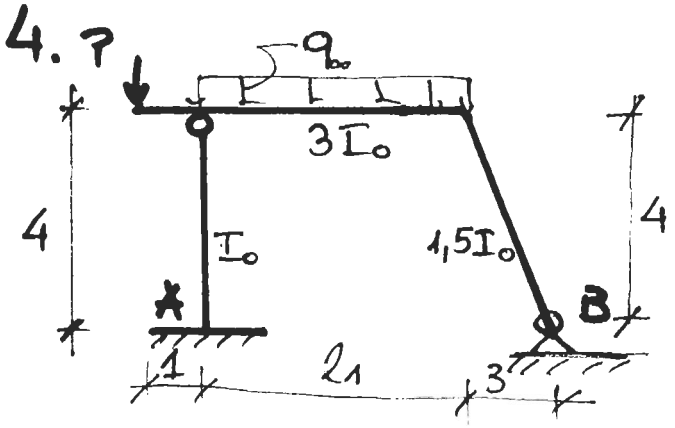
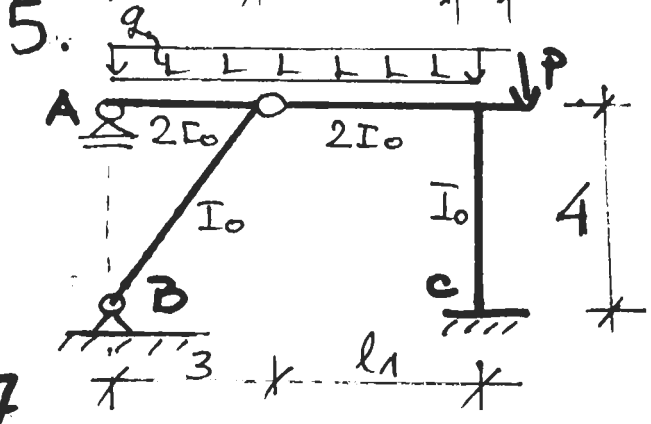
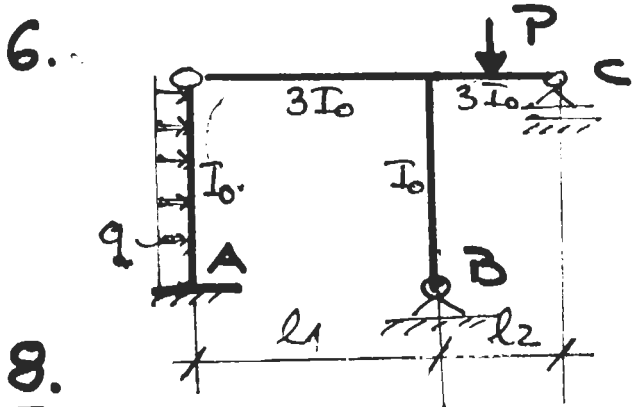


5.



6.



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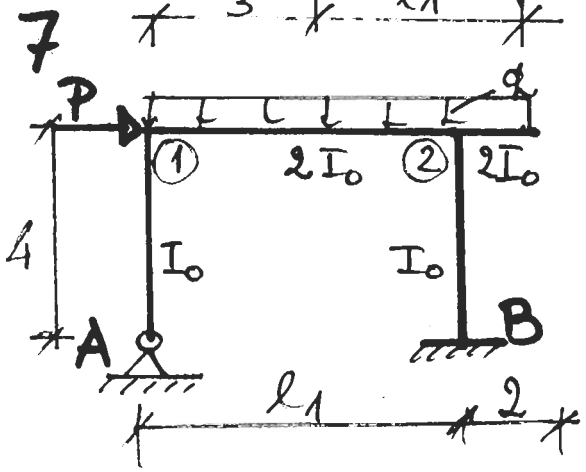

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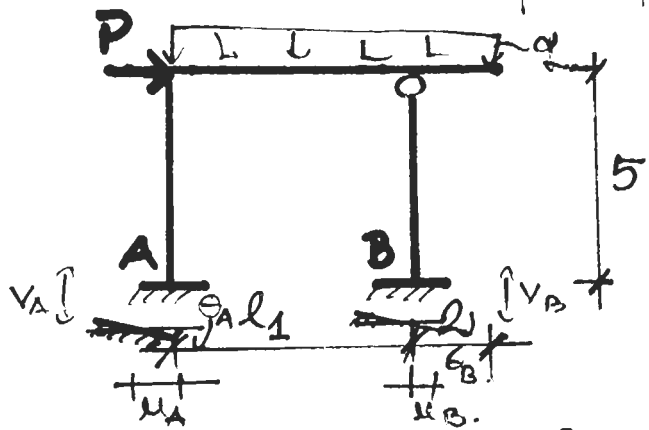


$P = 12 + 0{,}8n$ (KN)

$q = 6 + 0{,}5n$ (KN/m)

$l_1 = 2 + 0{,}2n$ (m)

$l_2 = 1 + 0{,}2n$ (m).

$n = 1 \div 5$: $\theta_A = 0{,}05n^\circ$; $\theta_B = 0{,}2n^\circ$

$n = 6 \div 10$: $v_A = 0{,}3n$ (cm);

$\theta_A = 0{,}03n^\circ$

$n = 11 \div 15$: $v_B = 0{,}05n$ (cm) $\theta_B = 0{,}0$

$n = 16 \div 20$: $\theta_A = 0{,}02n^\circ$ $u_B = 0{,}03n$

$n = 21 \div 25$: $v_A = 0{,}02n$ (m) $\theta_A = 0{,}0$

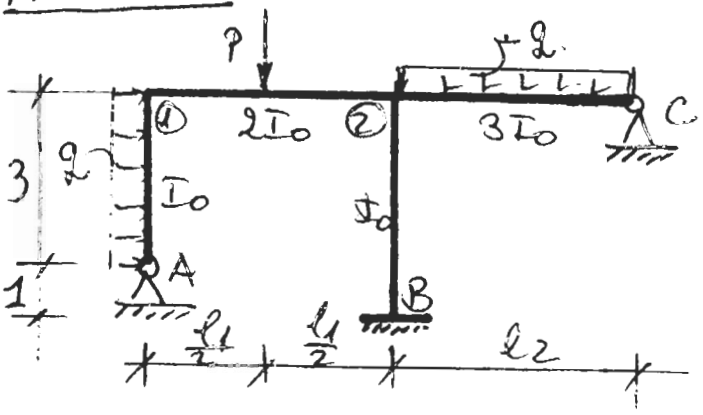
Notă: n este numărul de ordine

METODA DEPLASĂRILOR

grupa 32302

A. Clasic

9



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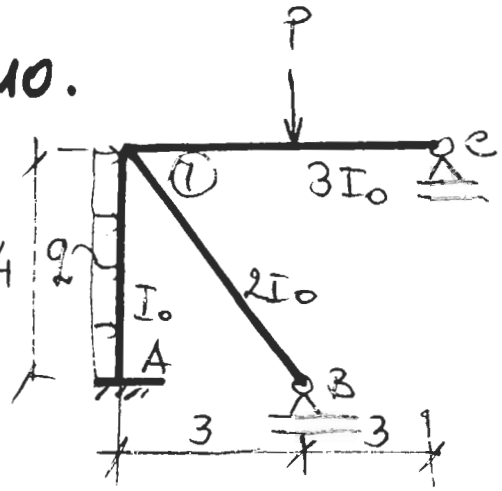
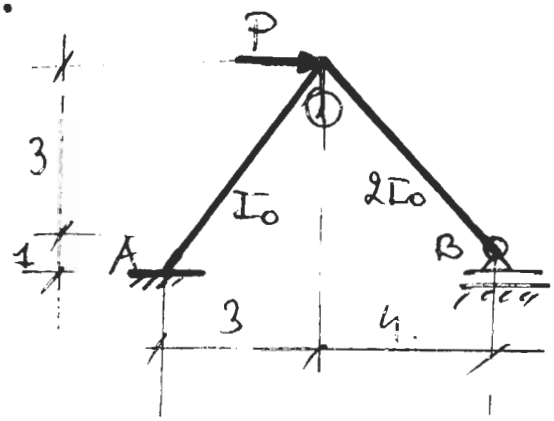
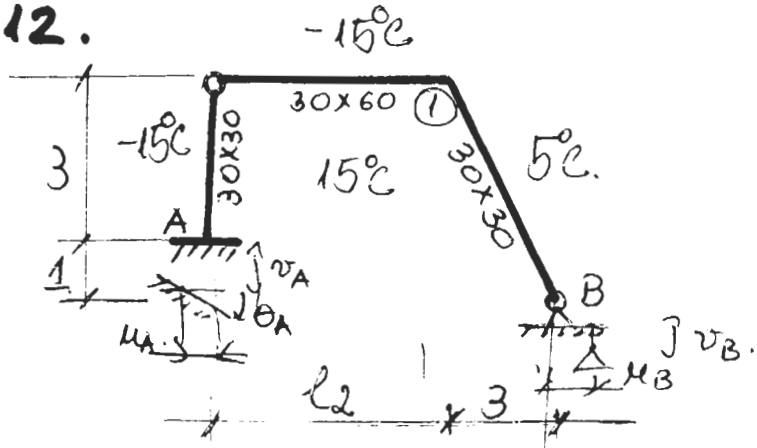


11.



12.



n = 1 ÷ 10 : $v_A = 95 + 0{,}05n$ (cm) $\theta_A = 0{,}2n°$

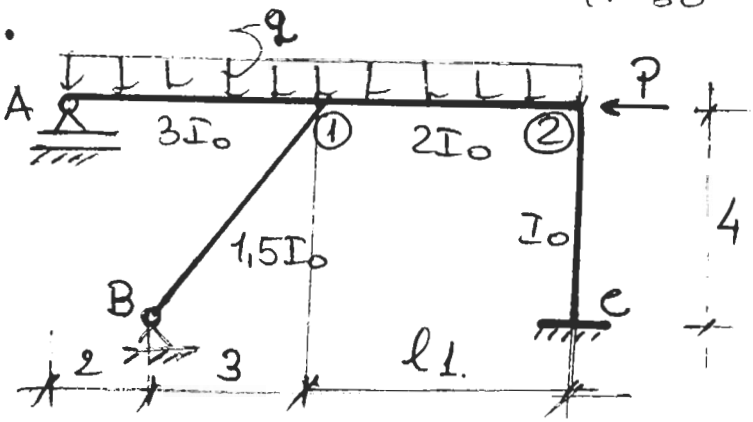
n = 11 ÷ 20 : $v_B = 905n$ (cm) $\theta_A = 9{,}05n°$

n = 21 ÷ 30 : $v_A = 0{,}02n$ (cm) $v_B = 0{,}03n$ (cm)

n > 30 $H_A = 0{,}02n$ (cm) . $\theta_A = 0{,}02n°$

B. Iterativ (M. Cross)

13.



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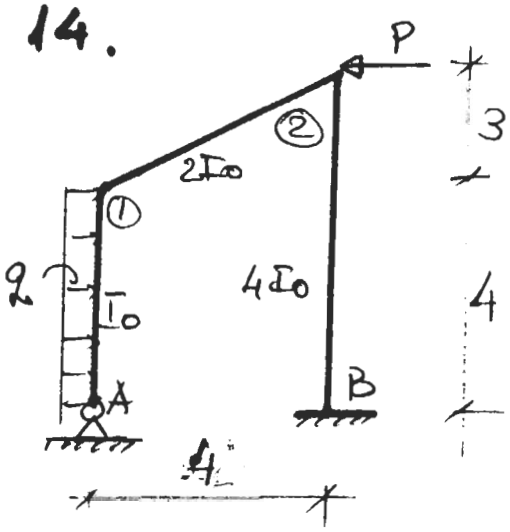

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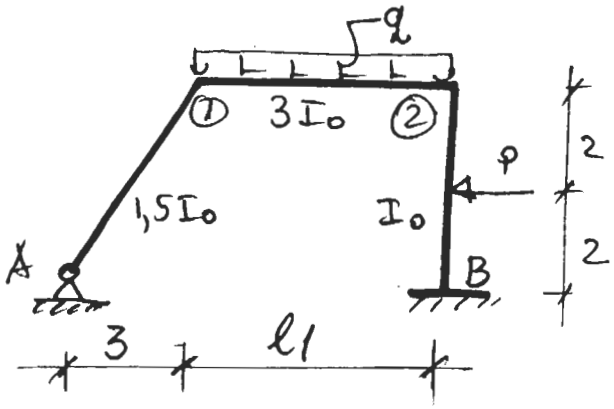
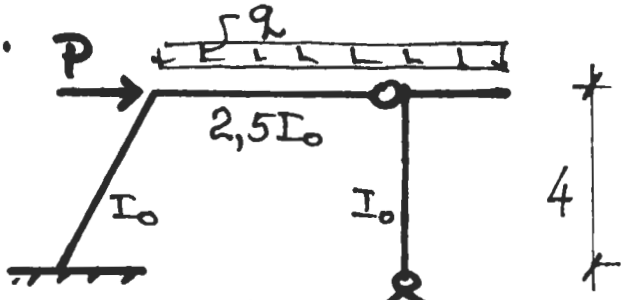


METODA FORȚELOR (EFORTURILOR)

Gr. 32303

1.



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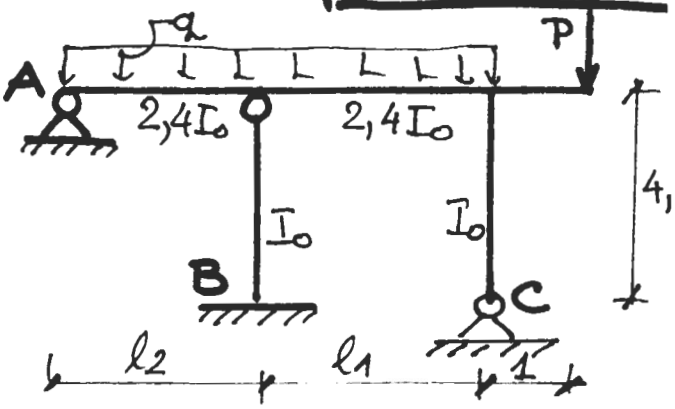

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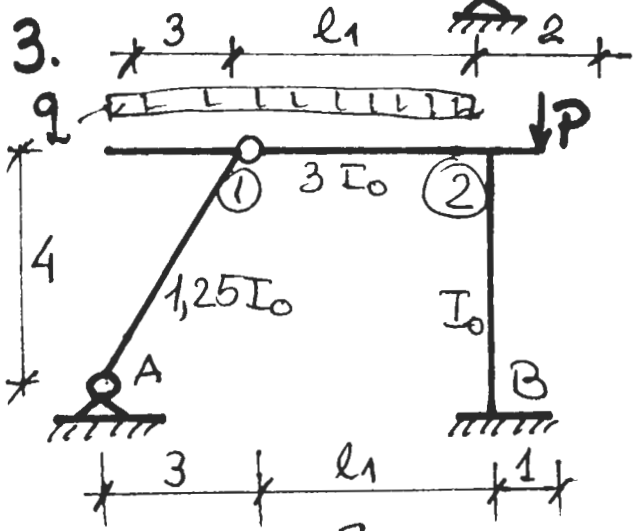

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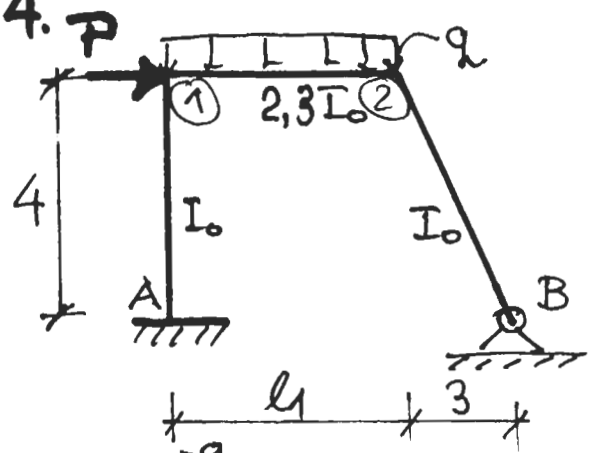
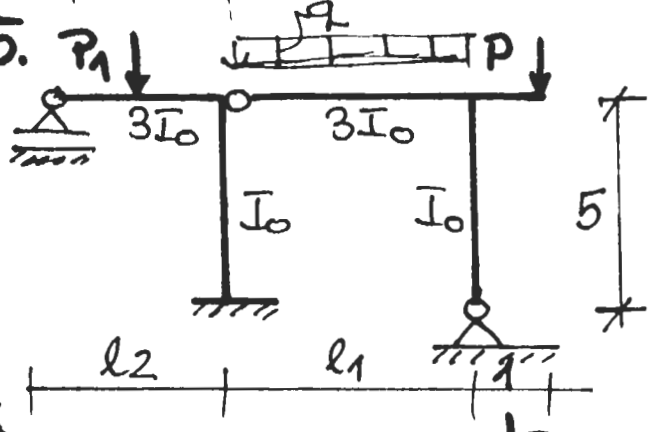
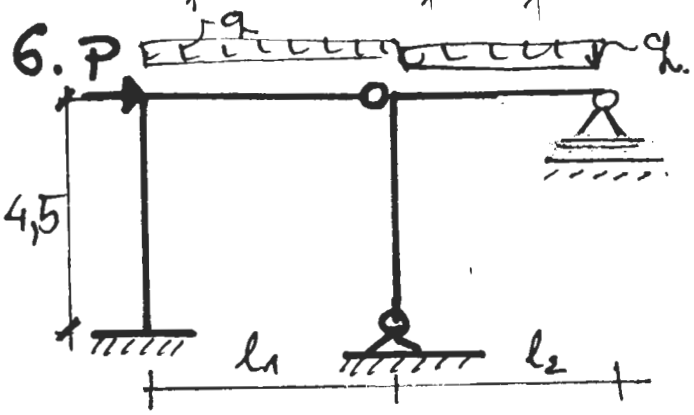


5.



6.



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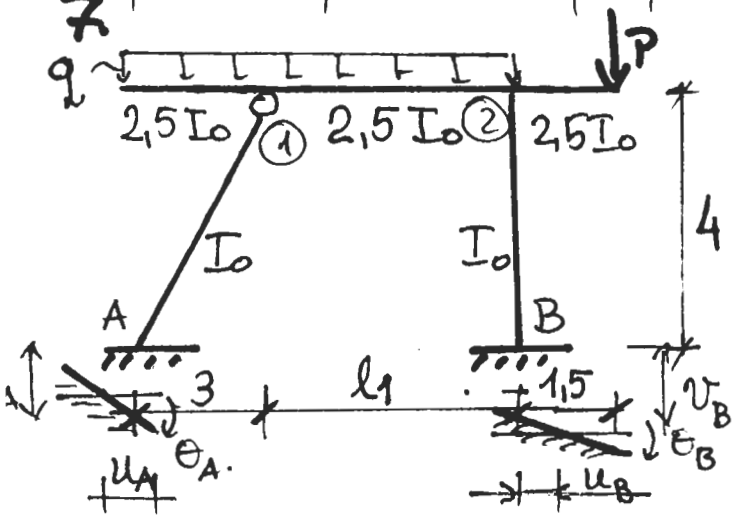
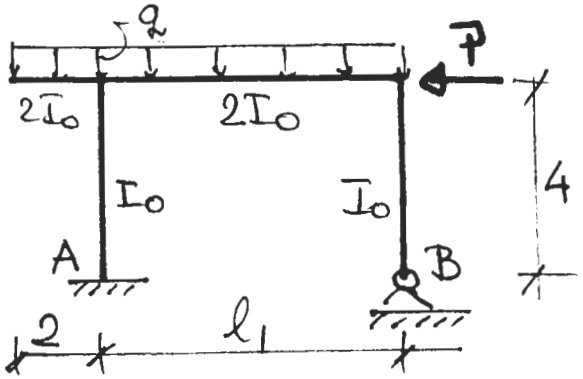


8.



$P_1 = 10 + n$ (kN)

$P = 8 + n$ (kN)

$q = 5 + 0{,}5n$ (kN/m)

$l_1 = 3 + 0{,}2n$ (m)

$l_2 = 1 + 0{,}2n$ (m)

$n = 1 \div 5$ $u_A = 0{,}2n$ (cm) $\theta_B = 0{,}05n^\circ$

$n = 6 \div 10$ $\theta_A = 0{,}02n^\circ$ $\theta_B = 0{,}03n^\circ$

$n = 11 - 15$ $v_A = 0{,}05n$ (cm) $\theta_A = 0{,}05n^\circ$

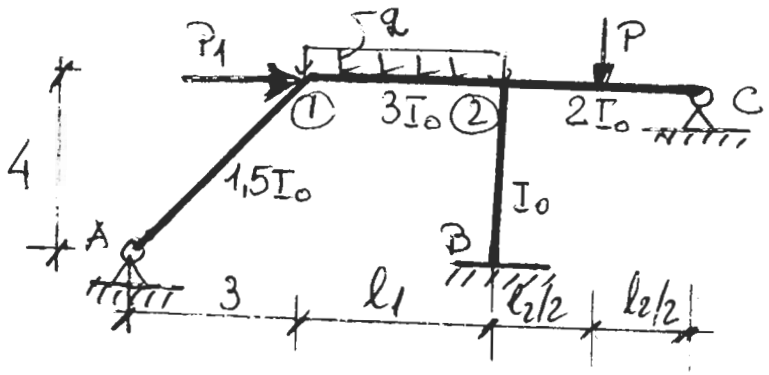
$n = 16 - 20$ $v_B = 0{,}05n$ (cm) $\theta_B = 0{,}02n^\circ$

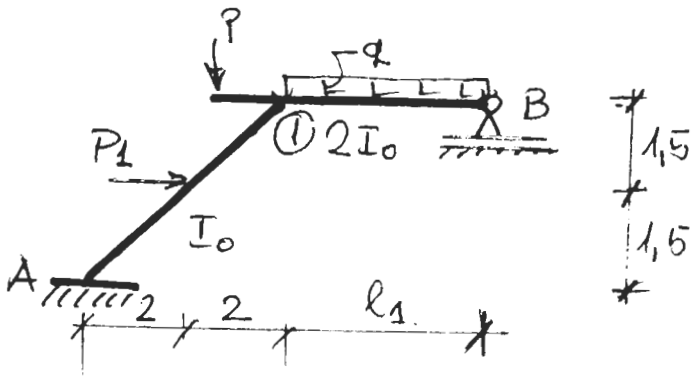
$n = 21 - 25$

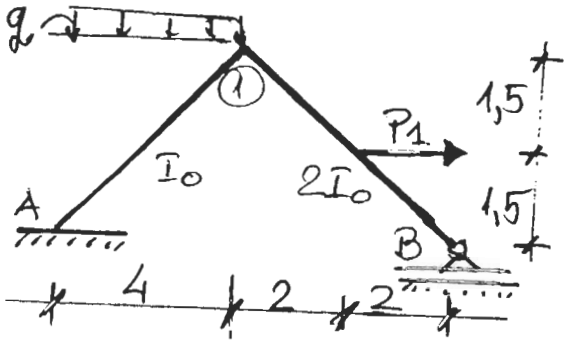
Note!

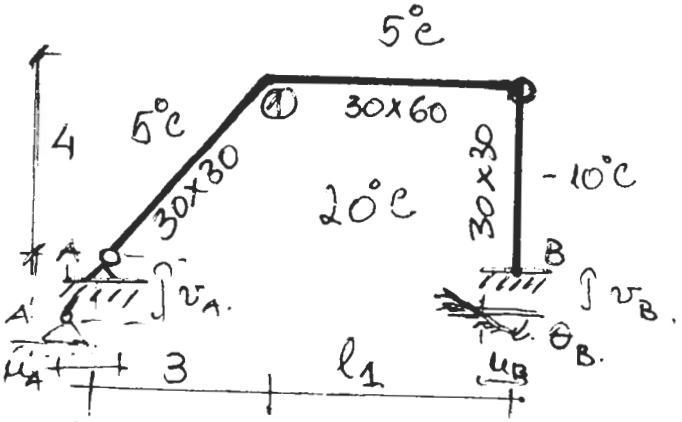
METODA DEPLASĂRILOR | GR. 32303

A. Clasic.









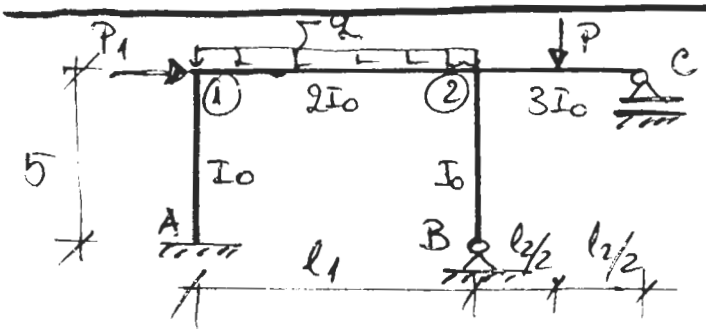
$u = 1 \div 10$: $v_A = 0{,}5 + 0{,}05\,u$ (cm); $\theta_B = 0{,}05u$

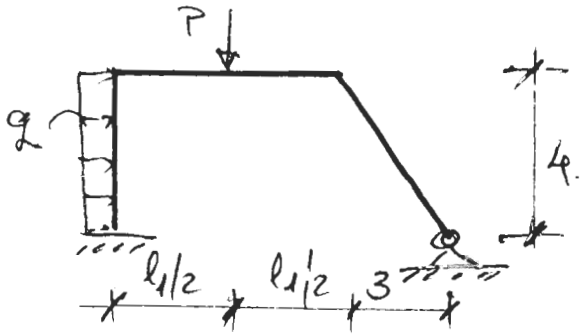
$u = 11 \div 20$: $v_B = 0{,}05\,u$ (cm), $\theta_B = 0{,}05u$

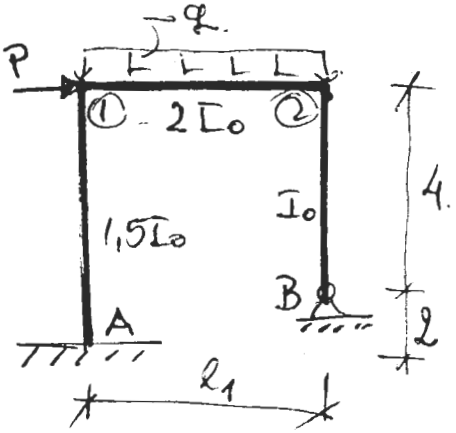
$u = 21 \div 30$: $u_B = 0{,}04u$ (cm) $\theta_B = 0{,}03u^\circ$

$u > 30$ $u_A = 0{,}04u$ (cm), $v_B = 0{,}04u$ (cm)

B. Iterativ în două etape (Metoda Cross)







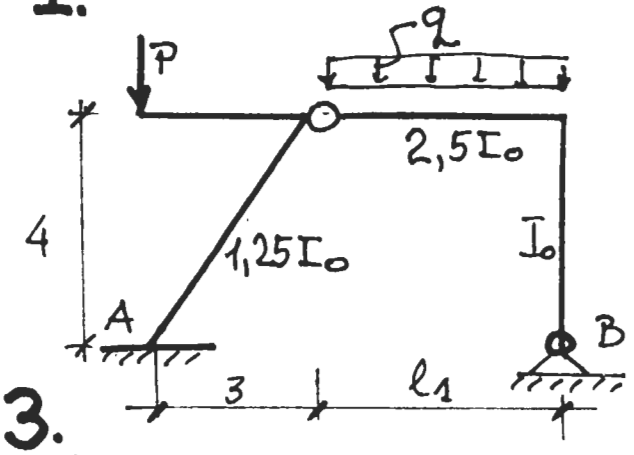
Obs.

Valorile încărcărilor și dimensiunile geometrice ale structurilor comune cu ale de la M.F.

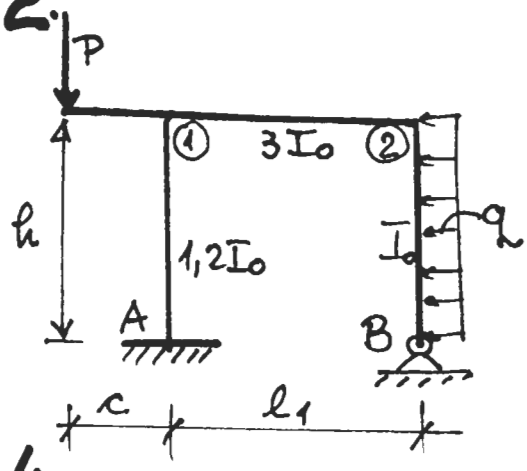
METODA FORȚELOR (EFORTURILOR)

grupa 32304

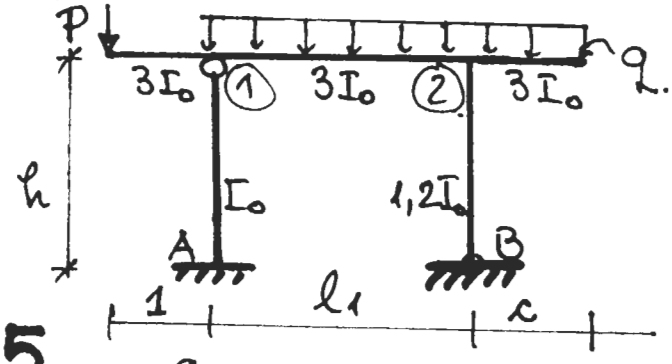
1.



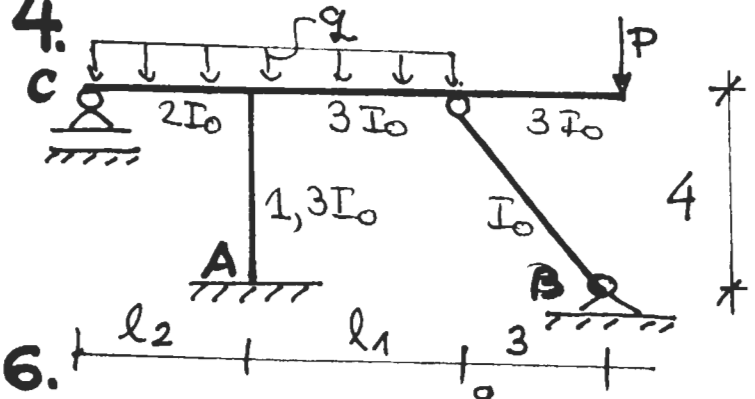
2.



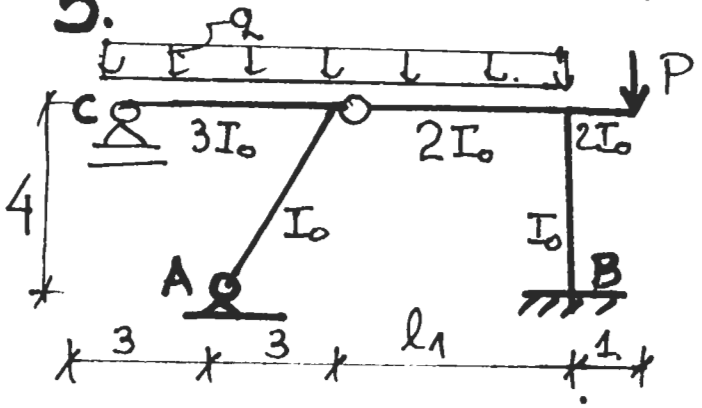
3.



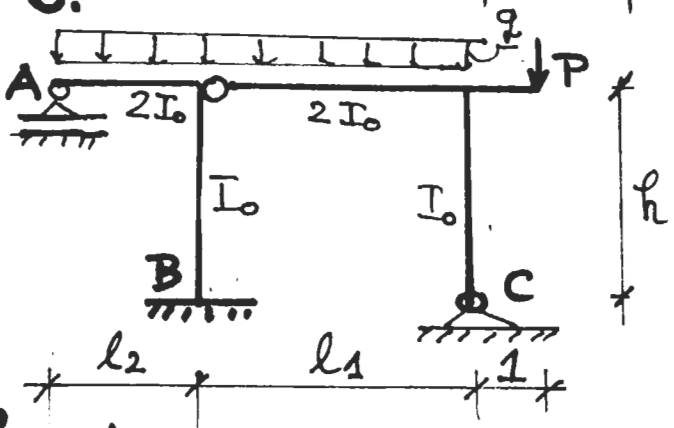
4.



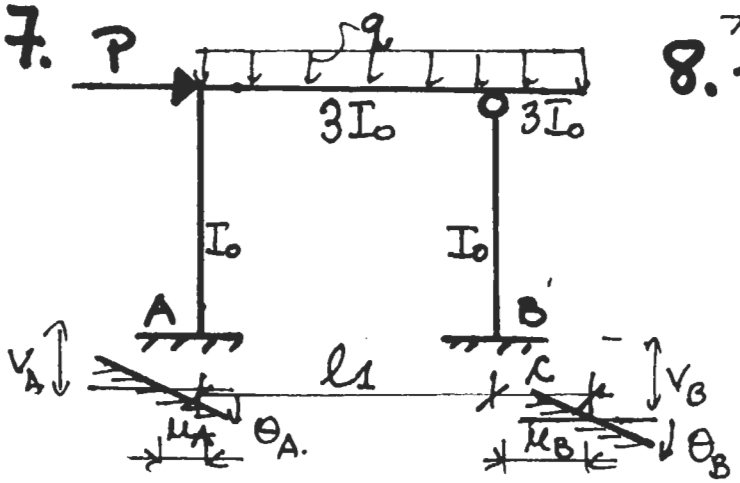
5.



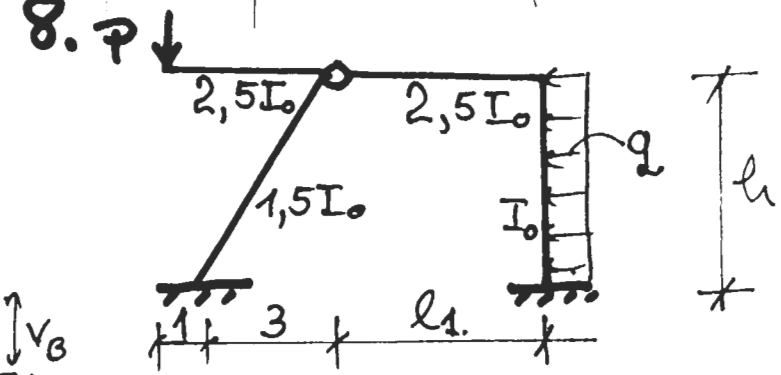
6.



7.



8.



$n = 1 \div 5$: $v_A = 0{,}2n$ (cm); $\theta_A = 0{,}05 \cdot n^\circ$

$n = 6 \div 10$ $u_A = 0{,}3n$ (cm) $\theta_B = 0{,}03n^\circ$

$n = 11 - 15$ $v_B = 0{,}02n$ (cm) $v_A = 0{,}01n$ (cm)

$n = 16 \div 20$ $u_B = 0{,}01n$ (cm) $\theta_A = 0{,}02n^\circ$

$n = 21 \div 25$ $v_A = 0{,}01n$ (cm) $\theta_B = 0{,}02n^\circ$

$P = 8 + n$ (kN)

$P_1 = 8 + 0{,}5n$ (kN)

$q = 5 + 0{,}4n$ (kN/m)

$l_1 = 3 + 0{,}2n$ (m)

$l_2 = 1 + 0{,}2n$ (m)

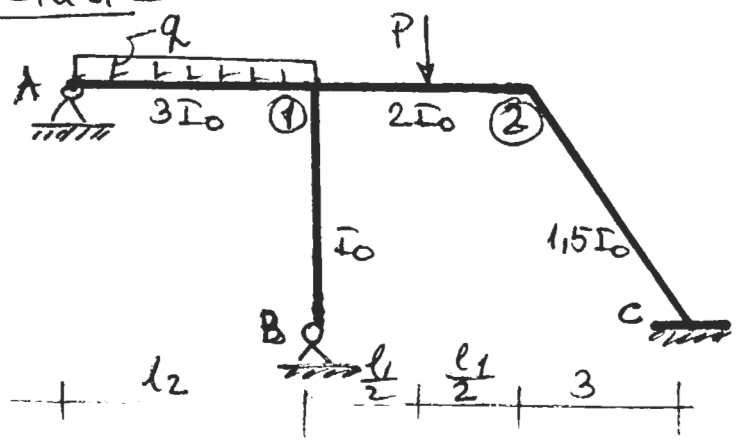
$h = 5$ m $\quad c = 1{,}5$ m.

Notă n este numărul de

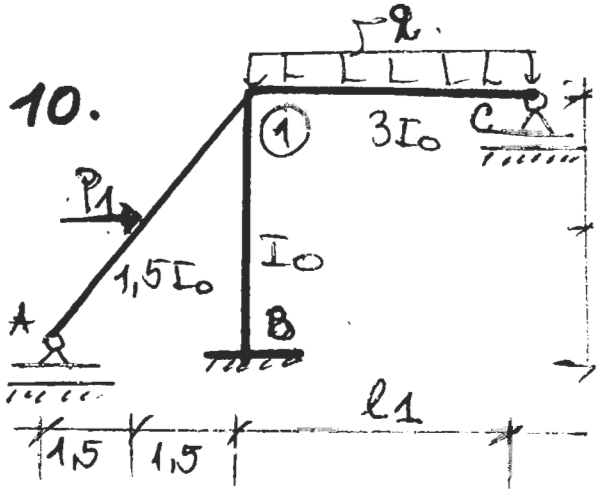
METODA DEPLASĂRILOR 32304

A. clasic

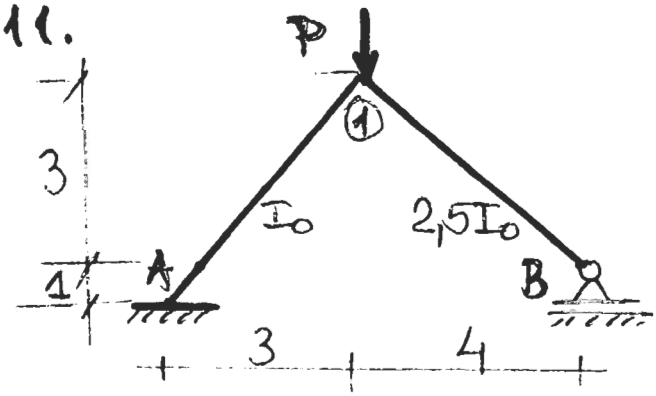
9.



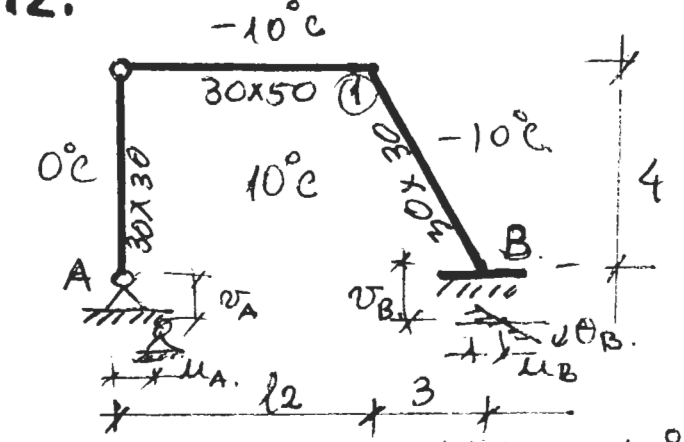
10.



11.



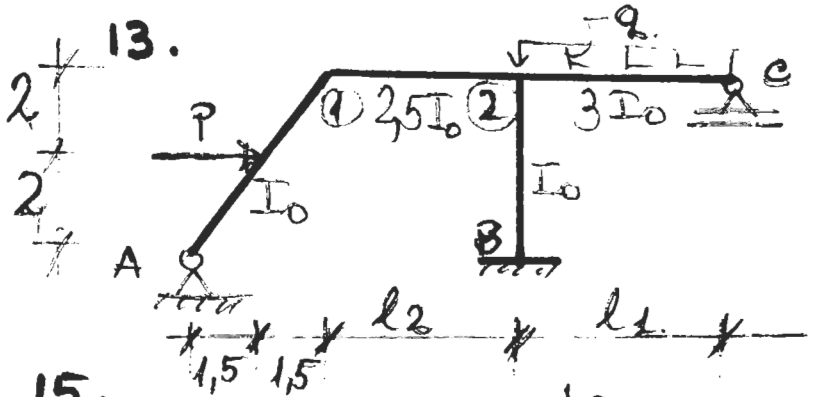
12.



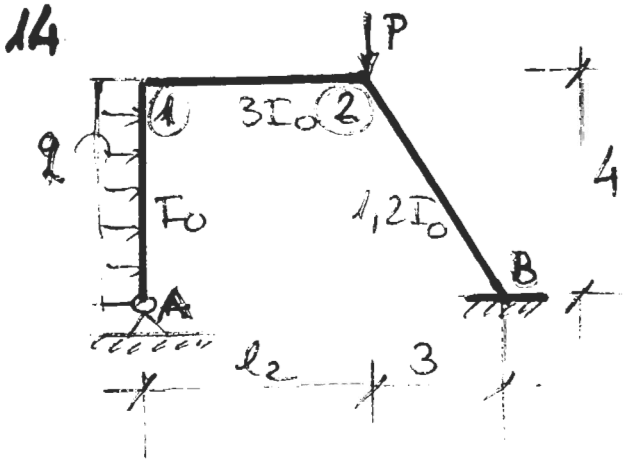
n = 1 ÷ 10:	$v_B = 0{,}5 + 0{,}05n$ (cm) $\theta_B = 0{,}1n°$
n = 11 ÷ 20	$v_A = 9{,}05n$ (cm) $\theta_B = 0{,}05n°$
n = 21 ÷ 30	$u_A = 0{,}02n$ (cm) $\theta_B = 0{,}02n°$
n > 30	$v_A = 0{,}02n$ (cm) $u_B = 0{,}03n$(

B. Iterativ în două etape (Metoda Cross)

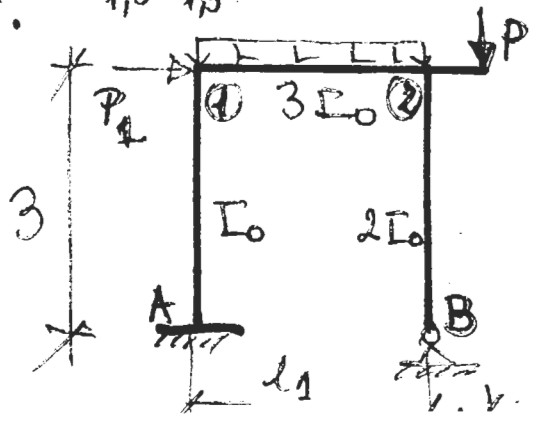
13.



14



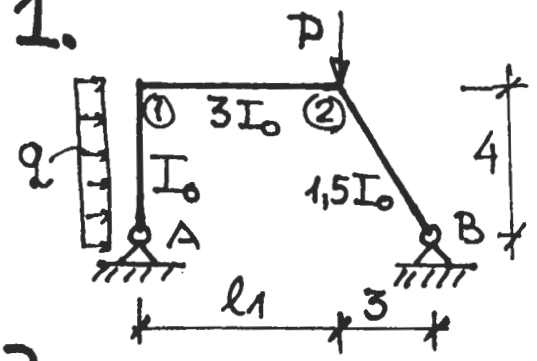
15.



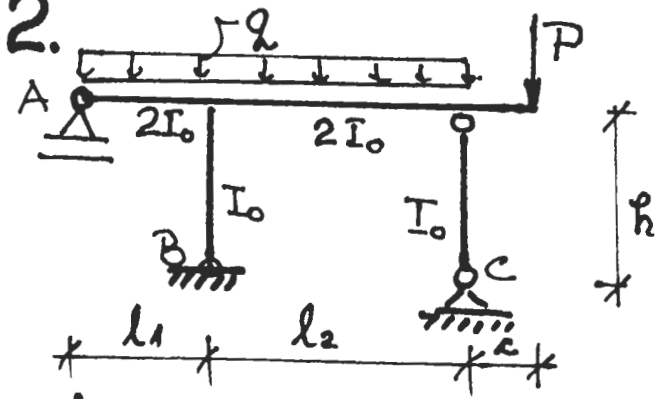
METODA FORȚELOR (EFORTURILOR)

32305

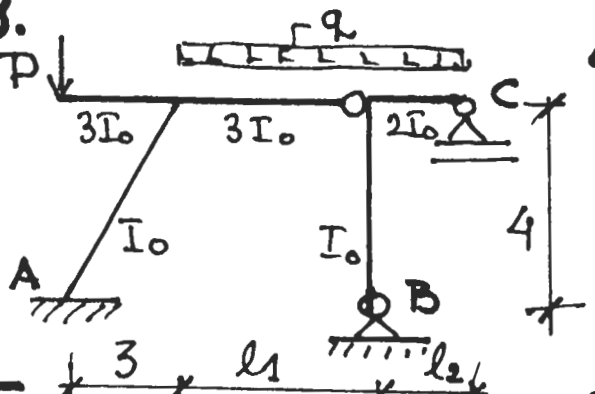
1.



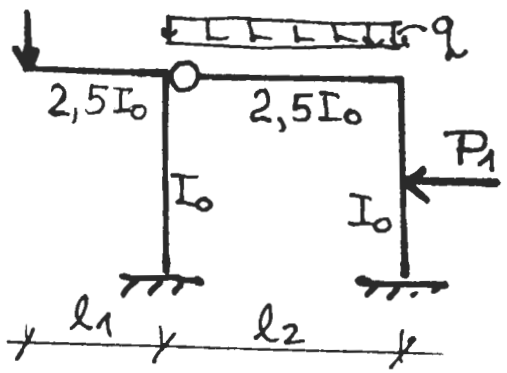
2.



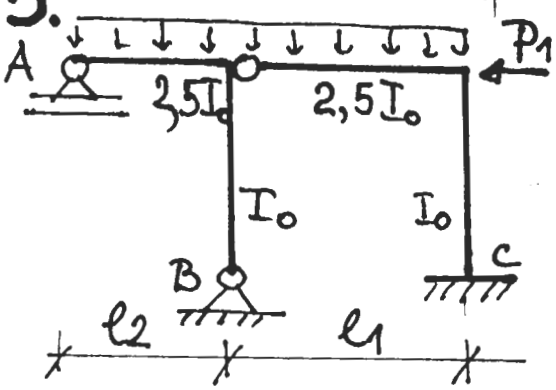
3.



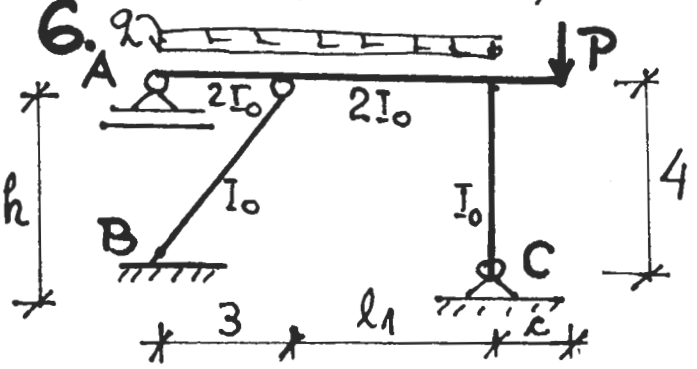
4.



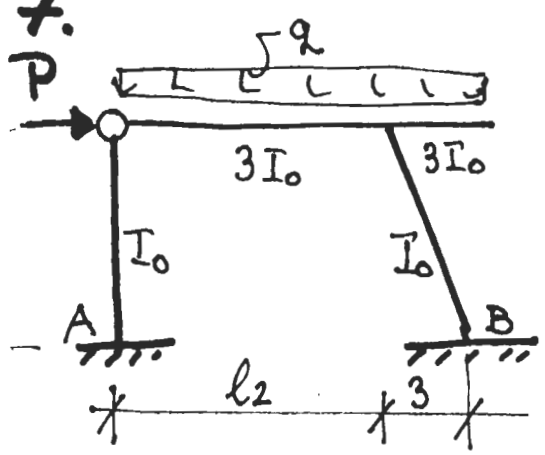
5.



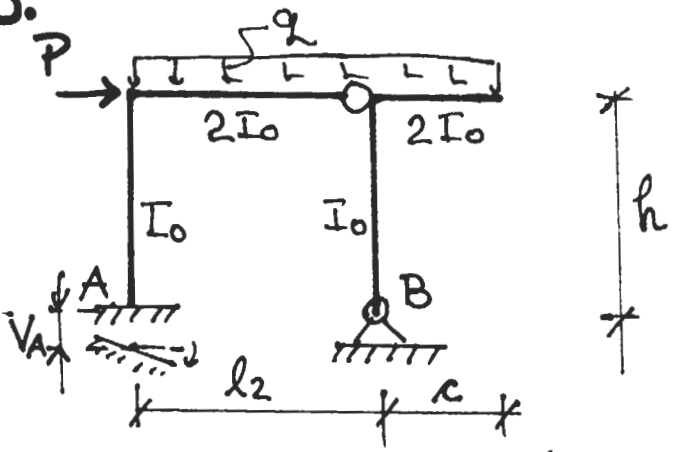
6.



7.



8.



$P = 10 + n$ (kN)
$P_1 = 10 + 0{,}5n$ (kN)
$q = 8 + 0{,}5n$ (kN)
$l_1 = 3 + 0{,}2n$ (m)
$l_2 = 1 + 0{,}2n$ (m)
$h = 2 + 0{,}1n$ (m)
$r = 2$ m

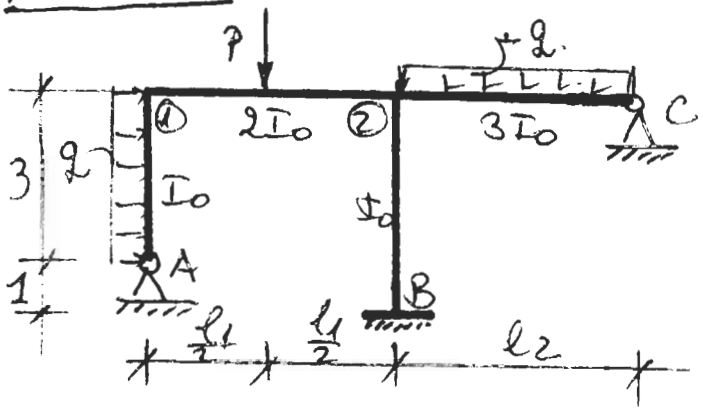
p.t. $n = 1-10$: $v_A = 0{,}1n$ m; $\theta_A = (0{,}05n)^\circ$
$n = 10-20$ $v_A = (0{,}05 + 0{,}03n)$ m
$\theta_A = (0{,}01n)^\circ$
$n \geq 20$ $v_A = (0{,}03n)$ m; $\theta_A = (0{,}02$

Nota: n este numărul de ordine al grupei

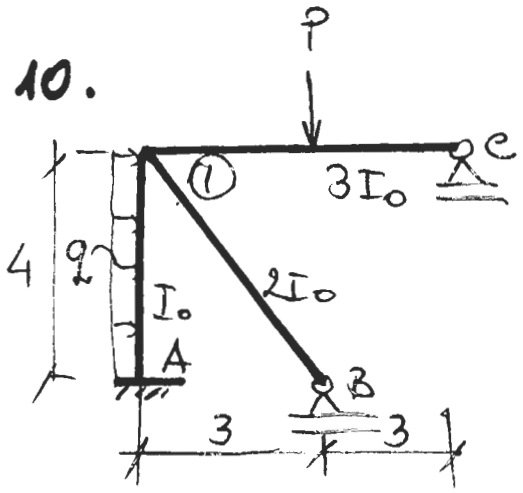
METODA DEPLASĂRILOR 32305

A. Clasic

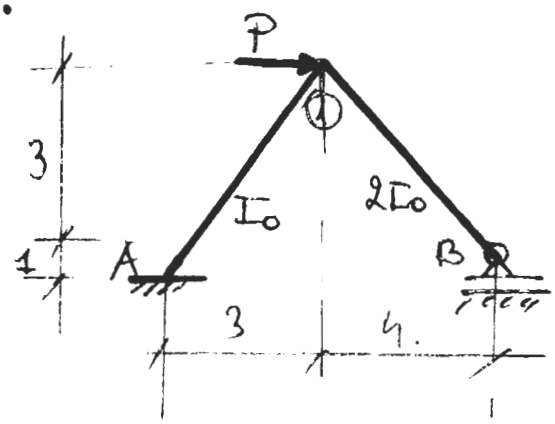
9



10.



11.



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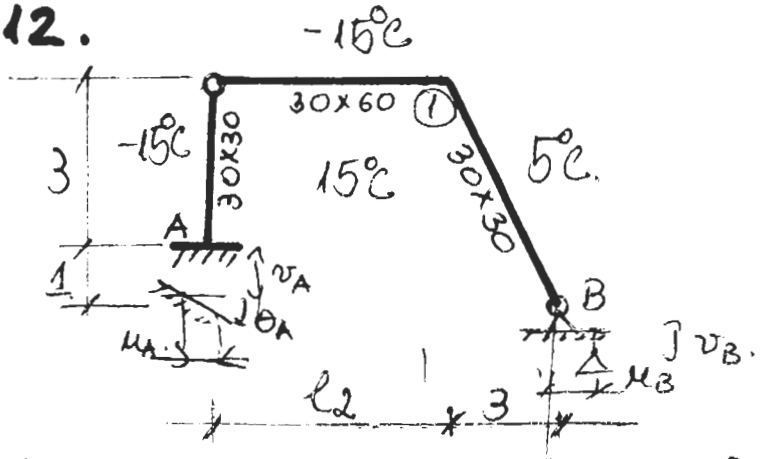


$n = 1 \div 10$: $v_A = 0{,}5 + 0{,}05n$ (cm) $\quad \theta_A = 0{,}2n°$

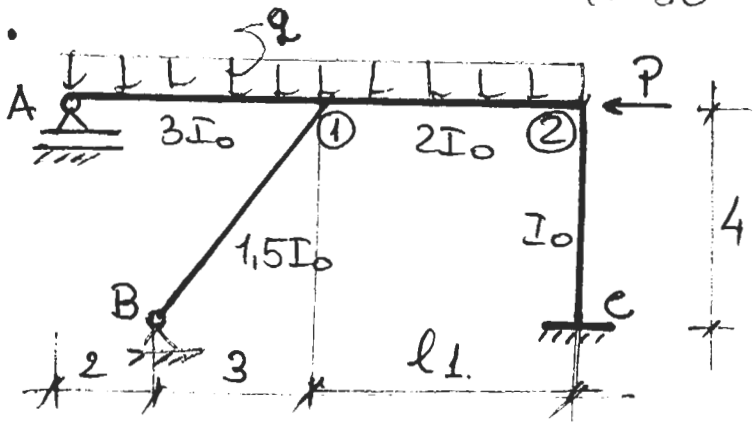
$n = 11 \div 20$: $v_B = 9{,}05n$ (cm) $\quad \theta_A = 9{,}05n°$

$n = 21 \div 30$: $v_A = 0{,}02n$ (cm) $\quad v_B = 0{,}03n$ (cm)

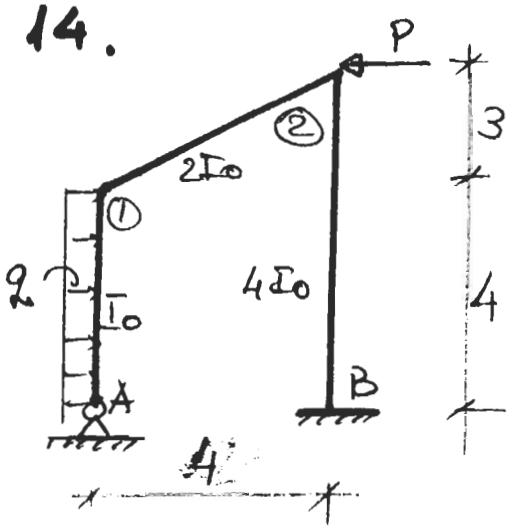
$n > 30$ $\quad u_A = 9{,}02n$ (cm) $\quad \theta_A = 0{,}02n°$

B. Iterativ (M. Cross)

13.



14.



15.