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2		35	2	0	2	1	30
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		144	10	0	6	6	122
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1		9	1	0	0	0	8
2		12	1	0	2	1	8
3		12	1	0	2	1	8
4	(	9	1	0	0	0	8
5		12	2	0	0	2	8
6		10	1	0	0	1	8
7		13	2	0	2	1	8
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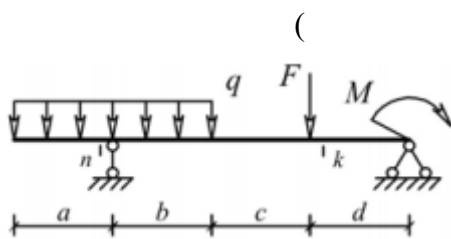
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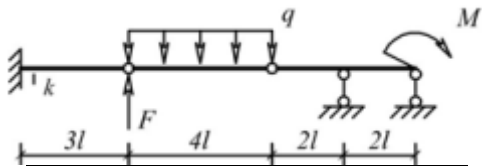
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a,	b,	c,	d,	F,	q,	M,
2	3	4	2	4	2	6

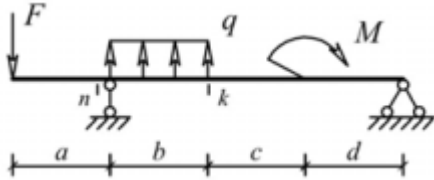
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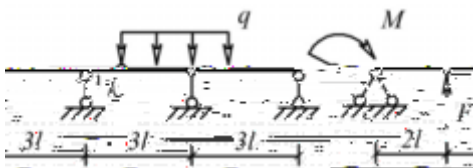


$l,$	$F,$	$q,$	$)$	$M,$
2	4	2		6

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$a,$	$b,$	$c,$	$d,$	$F,$	$q,$	$)$	$M,$
3	3	2	1	14	2		16



$l,$	$F,$	$q,$	$)$	$M,$
2	12	2		16

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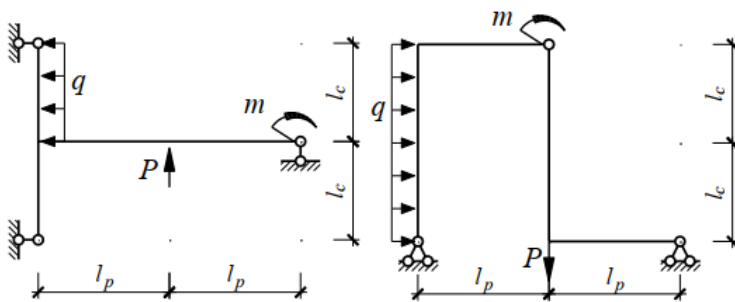
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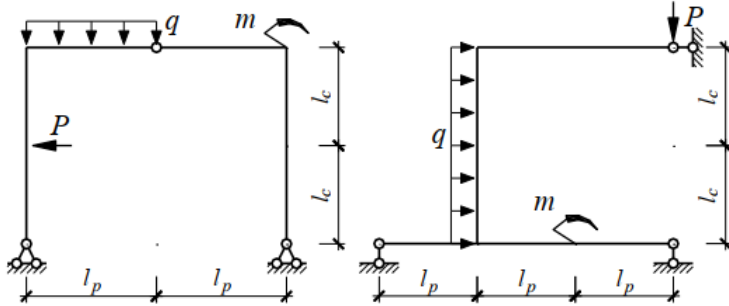
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$l_c,$	$l_p,$	$P,$	$q,$	$)$	$M,$
3	2	8	3		10
1,5	2	6	1		5



$l_c,$	$l_p,$	$P,$	$q,$	$m,$	$M,$
2,5	2	10	4		15
2	1,5	14	2		15

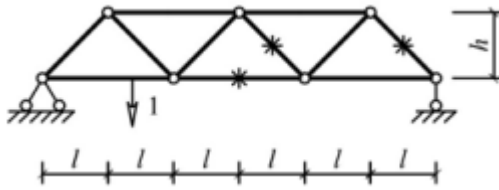
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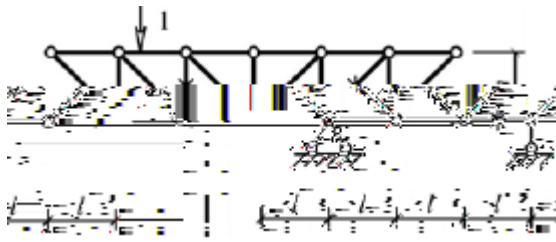


$l,$	$h,$	$F,$
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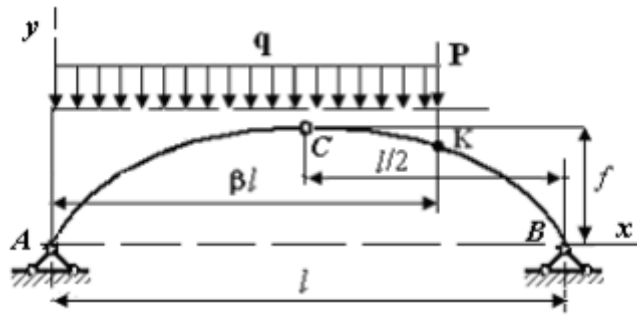


$l,$	$f,$	$F,$	$q,$
2	4	12	2



$l,$	$h,$	$F,$
2	1	12

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$P=10$     $q=2$     $l=4$     $f=1$     $7$     $1/($

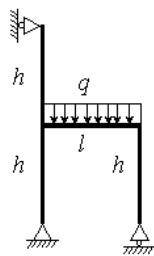
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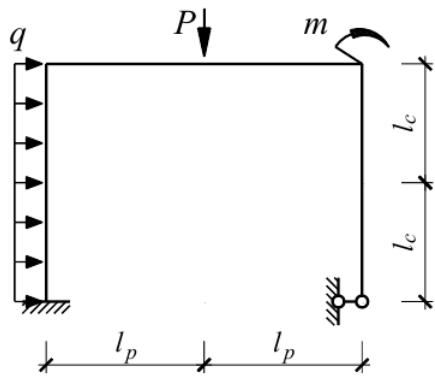


$l,$	$h,$	$q,$
11	2	15

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$l_c,$	$l_p,$	$P,$	$q,$	$M,$
2,5	3	30	10	40

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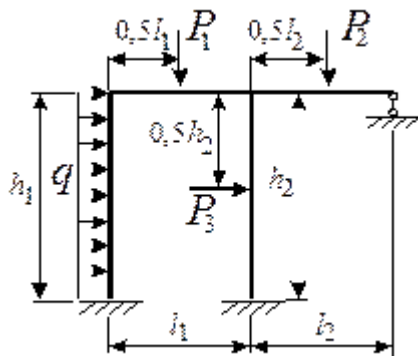
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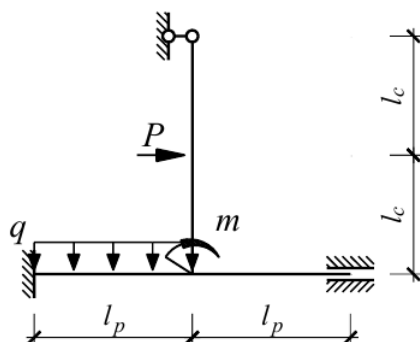
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$l_1,$	$l_2,$	$h_1,$	$h_2,$	$q,$	$P_1,$	$P_2,$	$P_3,$	$I_1/I_2$
4	10	3	11	1,1	4	0	0	0,5



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$l_c,$	$l_p,$	$P,$	$q,$	$M,$
1,5	1	10	6	20

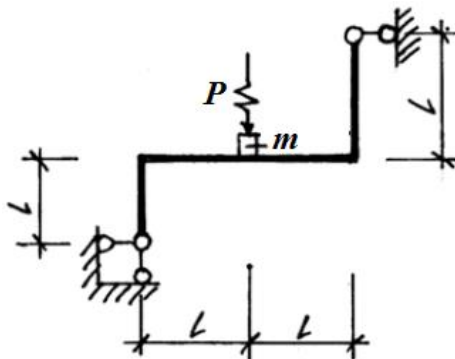
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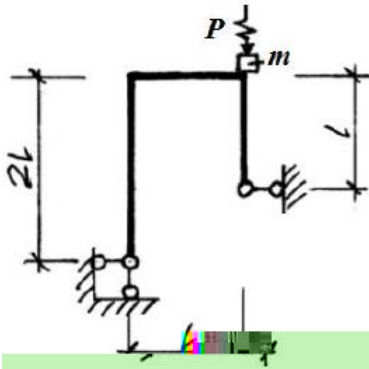
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$l = 2 \text{ м}, m = 1000 \text{ кг}, P = P_0 \sin \theta t, P_0 = 2 \text{ кН}, EI = 20000 \text{ кН} \cdot \text{м}^2,$   
 $\theta = 0,8\omega_{min}.$

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$l=1 \quad m=2000 \quad P = P_0 \sin \theta t, P_0 = 2 \text{ кН}, EI = 20000 \text{ кН} \cdot \text{м}^2, \theta =$   
 $0,8\omega_{min}.$

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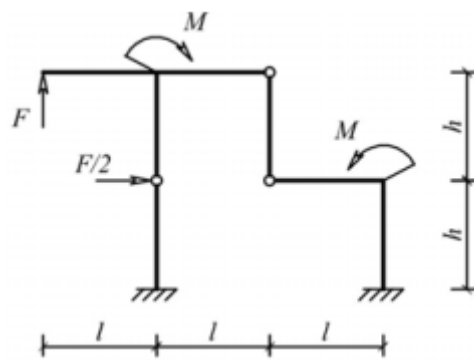
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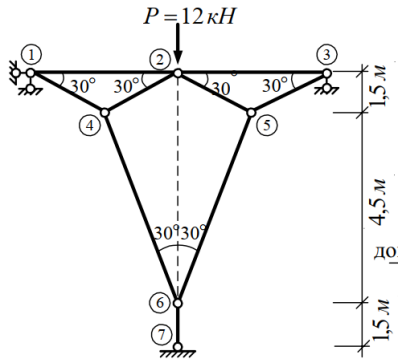
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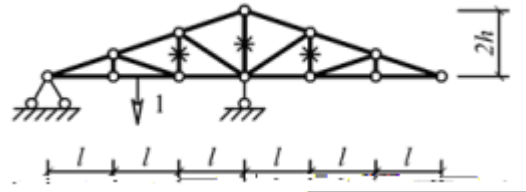
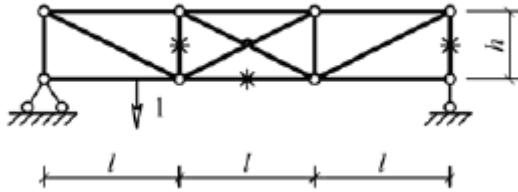


$l,$	$h,$	$F,$	$M,$
2	2,5	10	20

2.

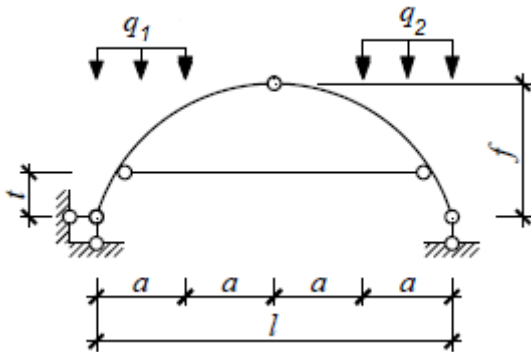


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$l,$	$h,$
0,75	1,5
1,75	2

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$a,$	$f$	$t$	$q_1$ /	$q_2$ .
1	2	0,5	10	16

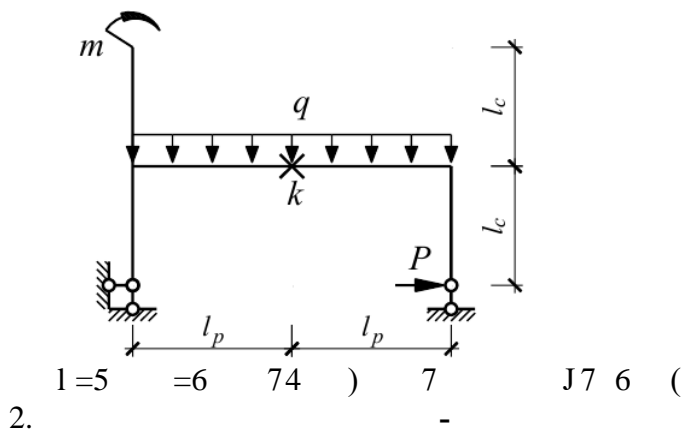
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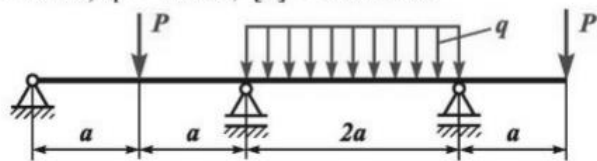
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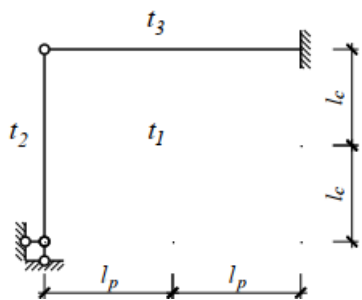
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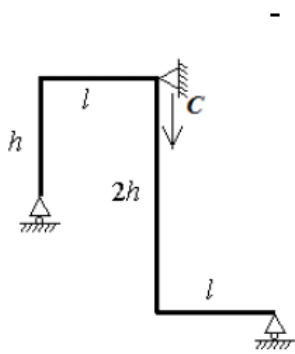
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 $a = 1 \text{ m}, P = 10 \text{ kH}, q = 4 \text{ kH/m}, [\sigma] = 160 \text{ MPa}.$



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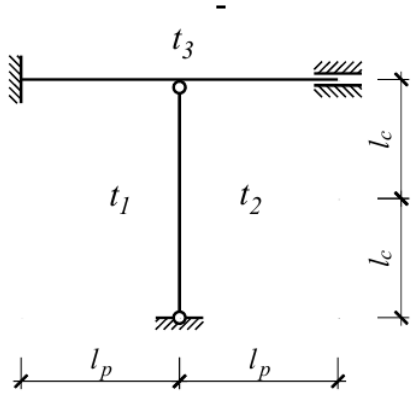


170    7.    t17    t27,    t3--    h7 / (



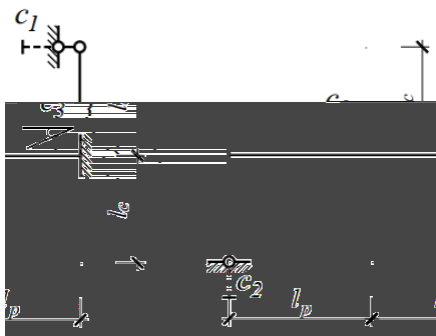
$l,$	$h,$	$c,$
2	3	4

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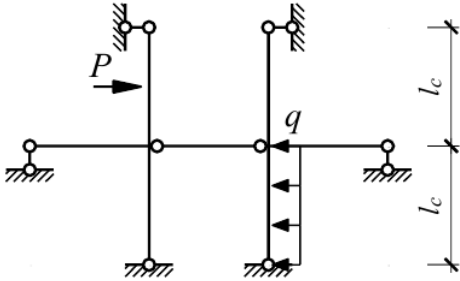
$l_1=1 \quad l_2=1,5 \quad t_1=-2 \quad t_2=15 \quad t_3=$  (

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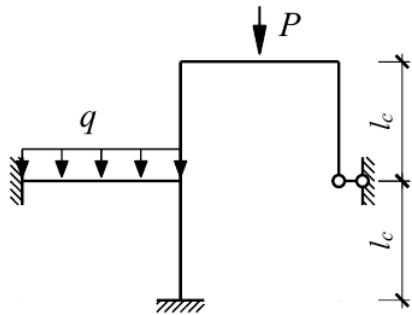
$l_c=1,5 \quad l_p=2 \quad c_1=2 \quad c_2=1 \quad c_3=0,05.$

7.



$P=12 \quad q=5 \quad ) \quad l_c=l_p7, \quad ($

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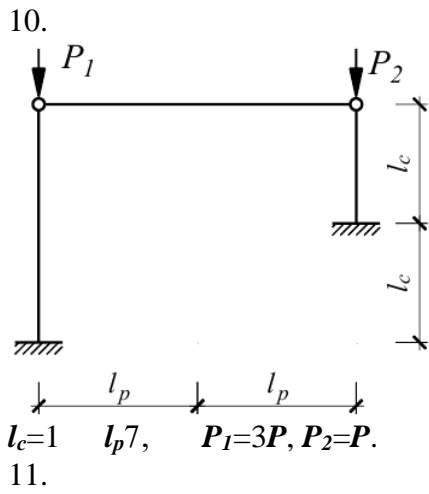


$l_c=3 \quad l_p7, \quad q=1 \quad ) \quad P=8$

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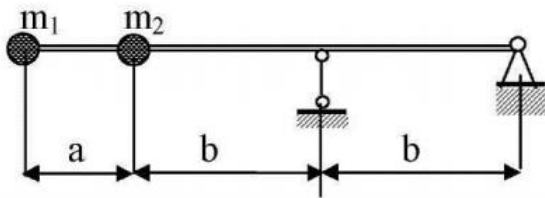
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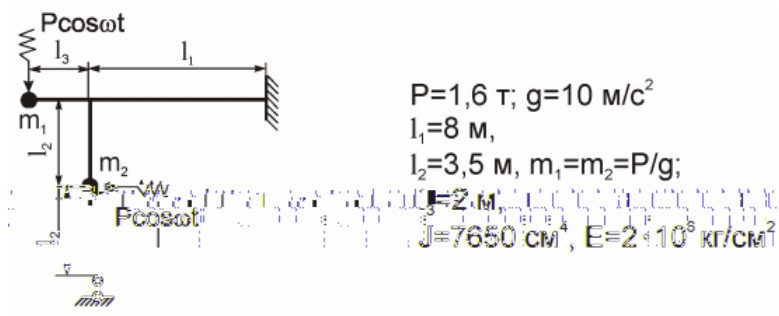


11.

$a = 1 \text{ м}, b = 2 \text{ м}, m_1 = 2m, m_2 = m.$



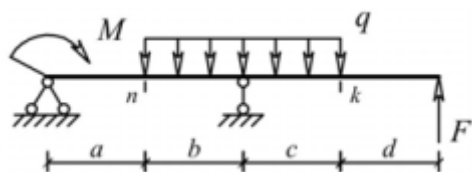
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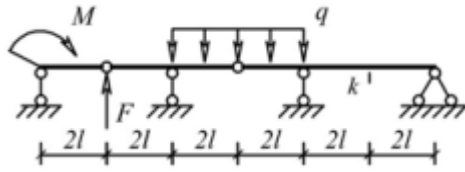


$a,$	$b,$	$c,$	$d,$	$M,$	$F,$	$q,$ /
2	3	4	2	6	4	2

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$l,$	$M,$	$F,$	$q,$ /
2	6	4	2

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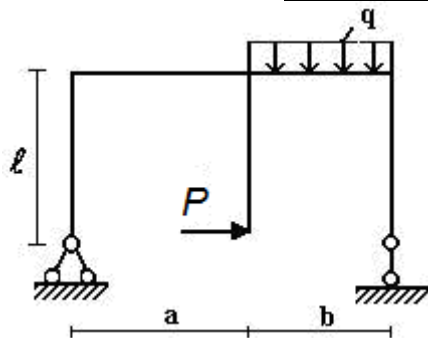
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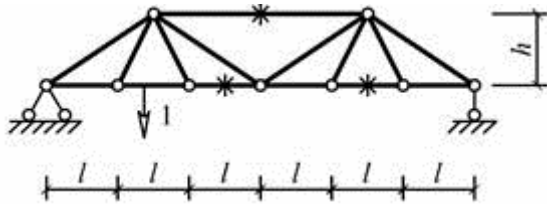
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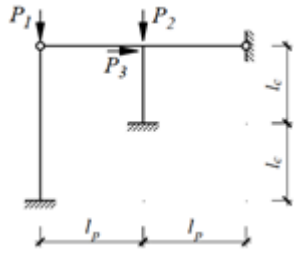
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$P_1=3P, P_2=P, P_3=2P, l_p=3, l_c=4$  .



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