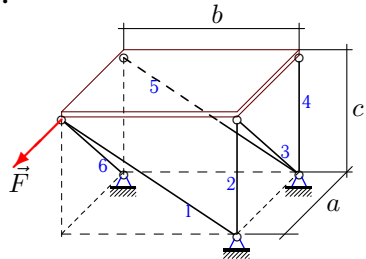
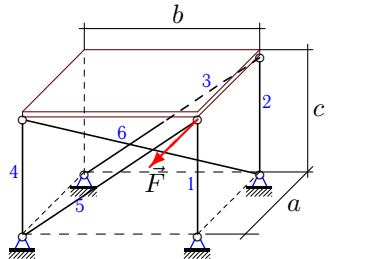
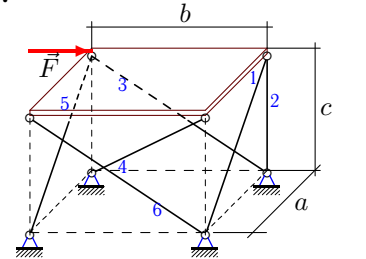
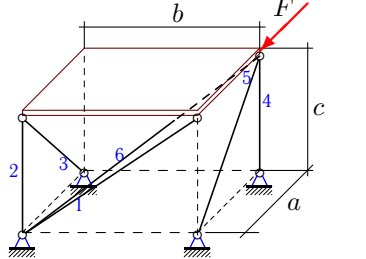
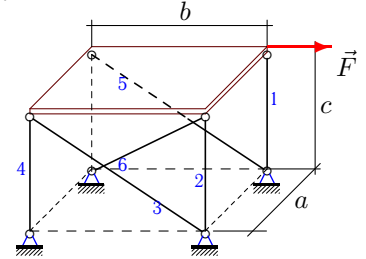
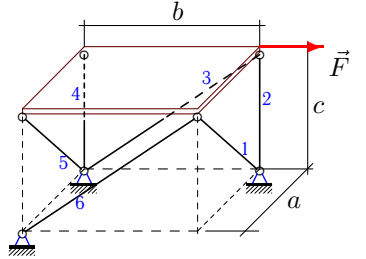
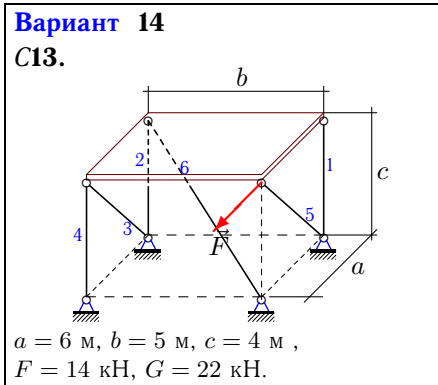
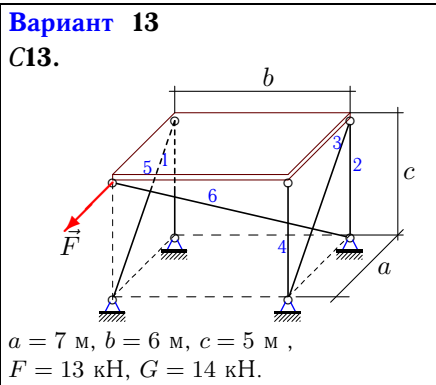
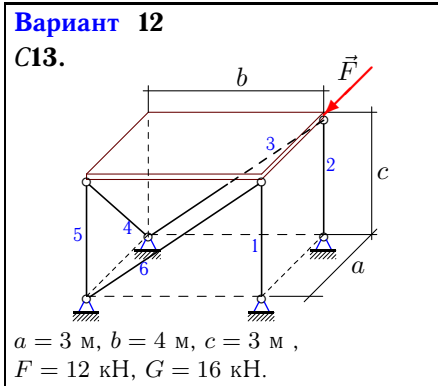
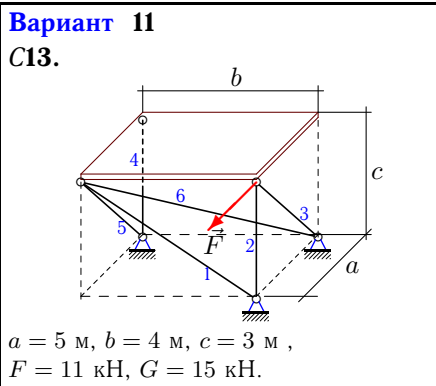
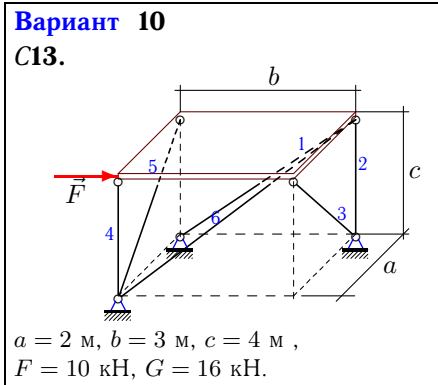
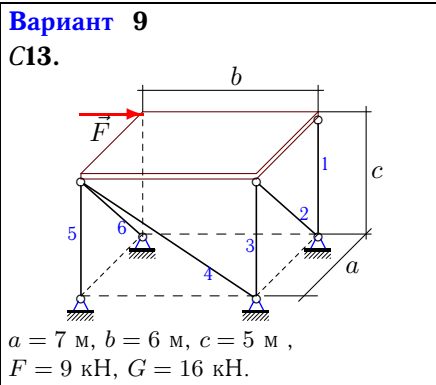
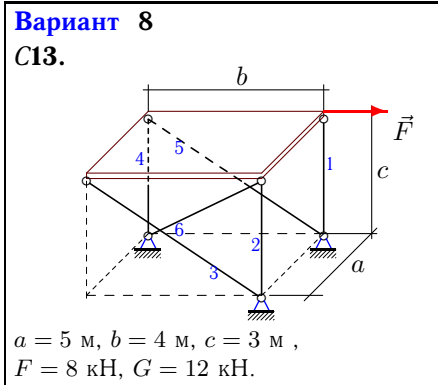
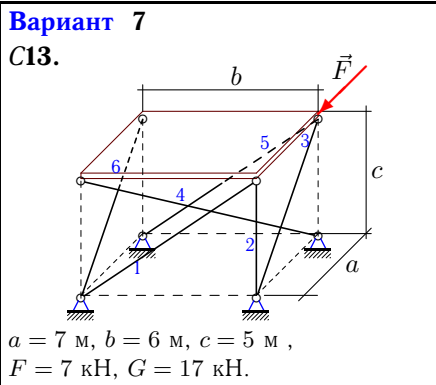


Определение усилий в стержнях, поддерживающих плиту

Однородная прямоугольная горизонтальная плита весом G опирается на шесть невесомых шарнирно закрепленных по концам стержней. Вдоль ребра плиты действует сила F . Определить усилия в стержнях (в кН).

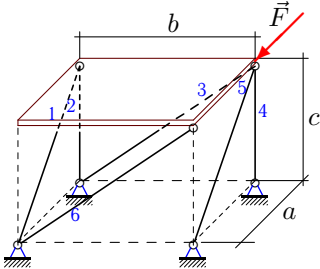
Кирсанов М.Н. Решебник. Теоретическая механика с. 101.

<p>Вариант 1 С13.</p>  <p>$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$ $F = 1 \text{ кН}, G = 6 \text{ кН}.$</p>	<p>Вариант 2 С13.</p>  <p>$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 2 \text{ кН}, G = 8 \text{ кН}.$</p>
<p>Вариант 3 С13.</p>  <p>$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$ $F = 3 \text{ кН}, G = 9 \text{ кН}.$</p>	<p>Вариант 4 С13.</p>  <p>$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 4 \text{ кН}, G = 6 \text{ кН}.$</p>
<p>Вариант 5 С13.</p>  <p>$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 5 \text{ кН}, G = 15 \text{ кН}.$</p>	<p>Вариант 6 С13.</p>  <p>$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 6 \text{ кН}, G = 7 \text{ кН}.$</p>



Вариант 15

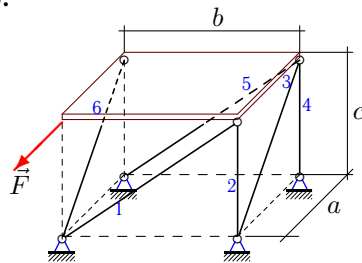
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 15 \text{ кН}, G = 23 \text{ кН}.$

Вариант 16

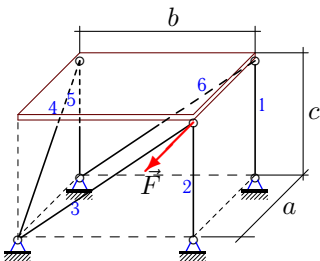
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 16 \text{ кН}, G = 26 \text{ кН}.$

Вариант 17

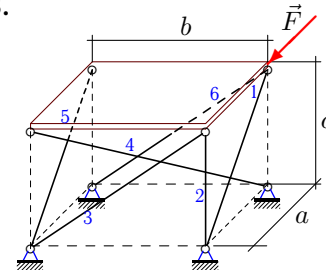
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 17 \text{ кН}, G = 18 \text{ кН}.$

Вариант 18

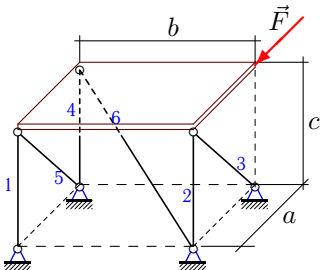
С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 18 \text{ кН}, G = 22 \text{ кН}.$

Вариант 19

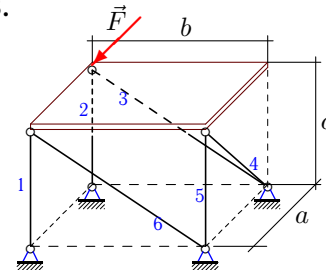
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 19 \text{ кН}, G = 29 \text{ кН}.$

Вариант 20

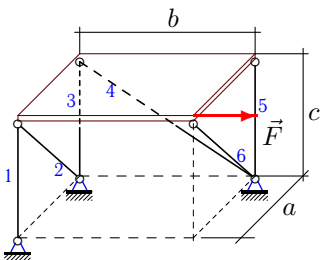
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 20 \text{ кН}, G = 22 \text{ кН}.$

Вариант 21

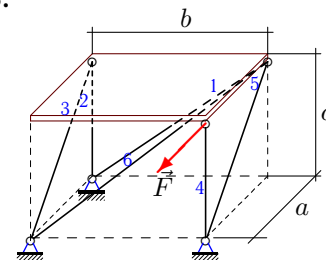
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 21 \text{ кН}, G = 22 \text{ кН}.$

Вариант 22

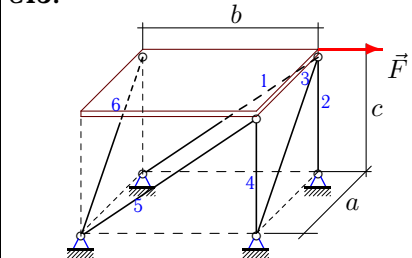
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 22 \text{ кН}, G = 25 \text{ кН}.$

Вариант 23

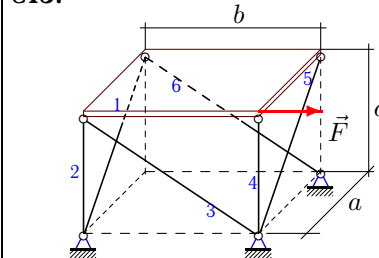
С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 23 \text{ кН}, G = 33 \text{ кН}.$

Вариант 24

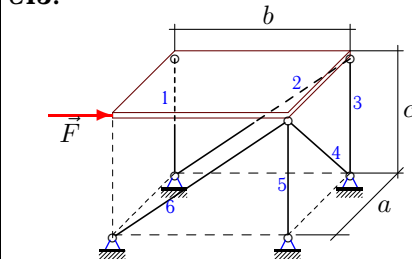
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 24 \text{ кН}, G = 26 \text{ кН}.$

Вариант 25

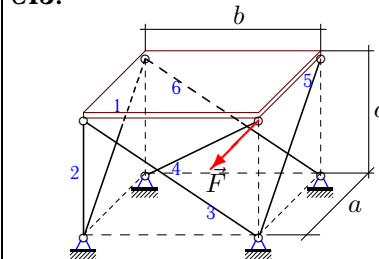
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 25 \text{ кН}, G = 35 \text{ кН}.$

Вариант 26

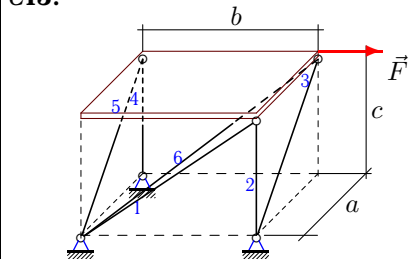
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 26 \text{ кН}, G = 28 \text{ кН}.$

Вариант 27

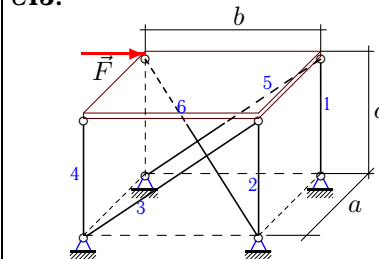
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 27 \text{ кН}, G = 36 \text{ кН}.$

Вариант 28

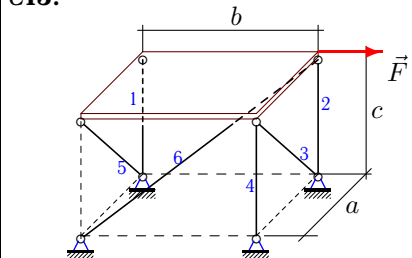
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 28 \text{ кН}, G = 33 \text{ кН}.$

Вариант 29

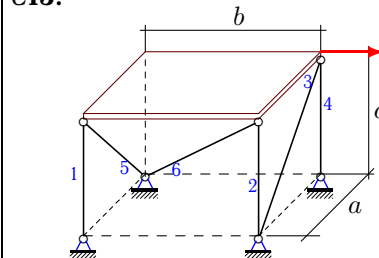
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 29 \text{ кН}, G = 35 \text{ кН}.$

Вариант 30

С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 30 \text{ кН}, G = 37 \text{ кН}.$

Ответы

	S_1	S_2	S_3	S_4	S_5	S_6
1	-6.667	0.000	5.657	-7.000	6.667	-4.243
2	0.000	-5.429	2.231	-5.429	0.000	2.997
3	-4.146	0.000	-3.682	-4.826	0.180	-3.682
4	0.000	-3.000	0.000	-0.143	-4.916	0.000
5	-3.333	-4.167	0.000	-3.333	-6.509	0.000
6	-4.482	-5.000	13.277	-7.000	4.482	-5.467
7	-7.029	-0.000	-7.742	-8.390	0.781	-7.742
8	0.000	-6.000	0.000	0.000	-10.000	0.000
9	-8.000	12.903	-7.500	-11.715	7.000	-12.903
10	16.667	-8.000	-14.907	5.333	-14.907	0.000
11	-0.000	-14.100	12.828	-7.500	-0.000	0.000
12	12.000	-20.000	20.000	16.971	-20.000	-20.000
13	2.286	0.000	0.000	-7.000	-15.976	0.000
14	-20.333	9.333	0.000	-20.333	16.826	0.000
15	-20.732	-0.000	18.409	-13.000	2.704	-18.409
16	10.934	-20.000	-8.964	14.000	-10.934	-16.648
17	-17.000	8.000	-28.333	-24.042	8.000	28.333
18	-14.124	0.000	-12.111	-8.800	-14.124	5.889
19	0.000	-33.500	26.870	-14.500	0.000	0.000
20	14.286	-25.286	22.315	24.578	-25.286	-22.315
21	-11.000	22.274	0.000	-26.250	4.750	-22.274
22	24.546	-12.500	-0.000	-12.500	-0.000	-32.963
23	56.250	-50.250	32.070	0.000	-27.500	-32.070
24	-22.366	20.000	-10.934	-26.000	22.366	-20.307
25	-17.500	0.000	0.000	0.000	-37.500	32.016
26	2.622	-18.571	2.380	6.393	-29.330	2.380
27	0.000	-18.000	-28.638	-18.000	-0.000	39.359
28	-39.833	-0.000	0.000	-16.500	36.448	0.000
29	-17.500	-24.167	30.948	-41.667	0.000	42.412
30	6.500	-25.000	0.000	-18.500	-32.016	43.875