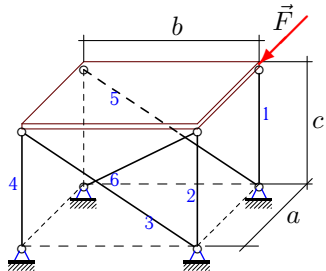
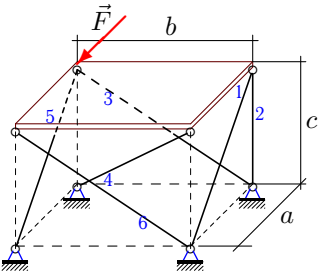
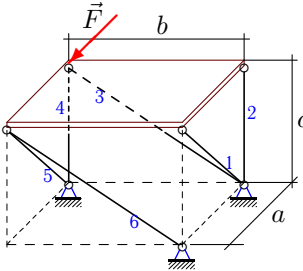
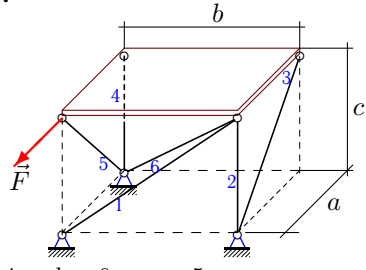
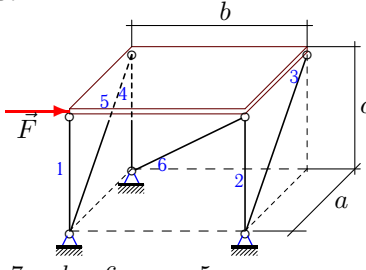
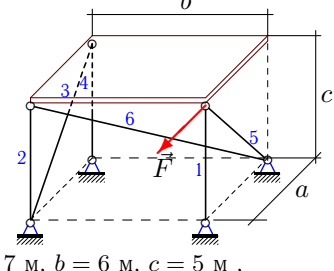


Определение усилий в стержнях, поддерживающих плиту

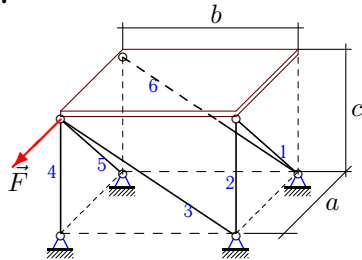
Однородная прямоугольная горизонтальная плита весом G опирается на шесть невесомых шарнирно закрепленных по концам стержней. Вдоль ребра плиты действует сила F . Определить усилия в стержнях (в кН).

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

<p>Вариант 1 С13.</p>  <p>$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$ $F = 1 \text{ кН}, G = 11 \text{ кН}.$</p>	<p>Вариант 2 С13.</p>  <p>$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 2 \text{ кН}, G = 8 \text{ кН}.$</p>
<p>Вариант 3 С13.</p>  <p>$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$ $F = 3 \text{ кН}, G = 6 \text{ кН}.$</p>	<p>Вариант 4 С13.</p>  <p>$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 4 \text{ кН}, G = 13 \text{ кН}.$</p>
<p>Вариант 5 С13.</p>  <p>$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 5 \text{ кН}, G = 10 \text{ кН}.$</p>	<p>Вариант 6 С13.</p>  <p>$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$ $F = 6 \text{ кН}, G = 15 \text{ кН}.$</p>

Вариант 7

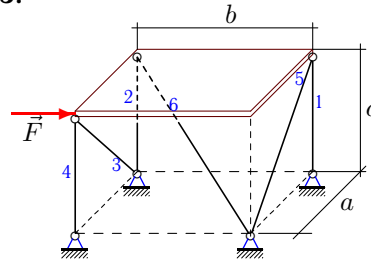
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 7 \text{ кН}, G = 16 \text{ кН}.$

Вариант 8

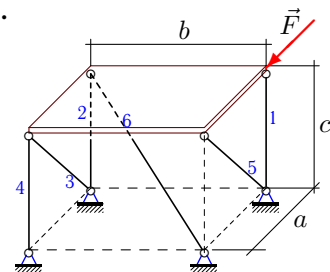
С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 8 \text{ кН}, G = 14 \text{ кН}.$

Вариант 9

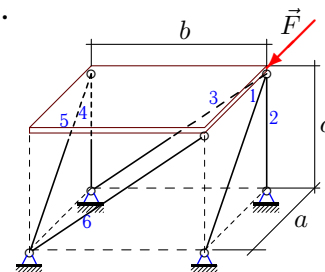
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 9 \text{ кН}, G = 17 \text{ кН}.$

Вариант 10

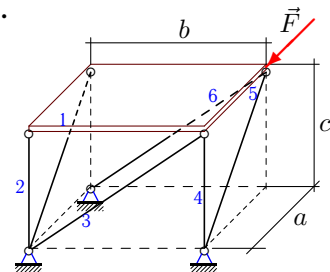
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 10 \text{ кН}, G = 18 \text{ кН}.$

Вариант 11

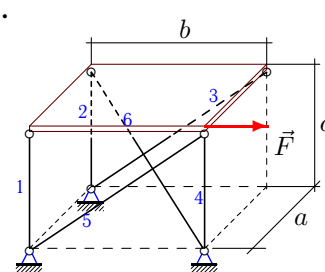
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 11 \text{ кН}, G = 15 \text{ кН}.$

Вариант 12

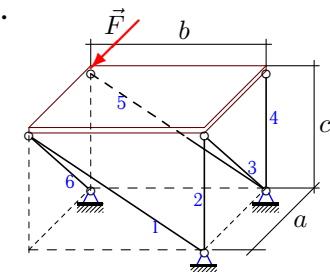
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 12 \text{ кН}, G = 15 \text{ кН}.$

Вариант 13

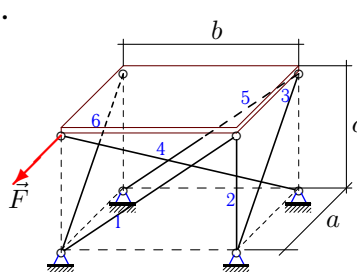
С13.



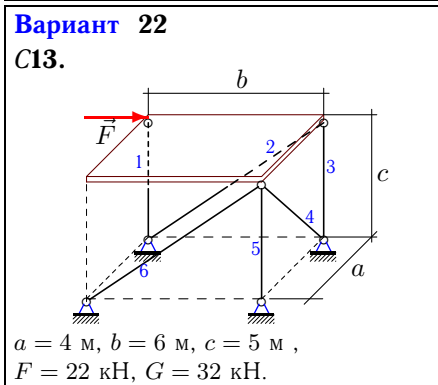
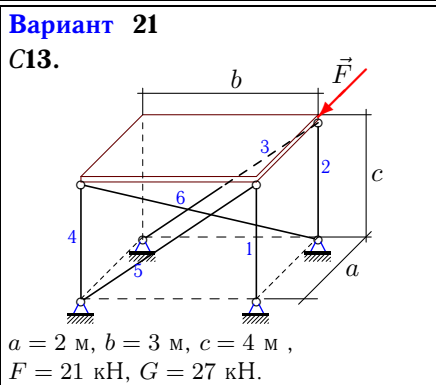
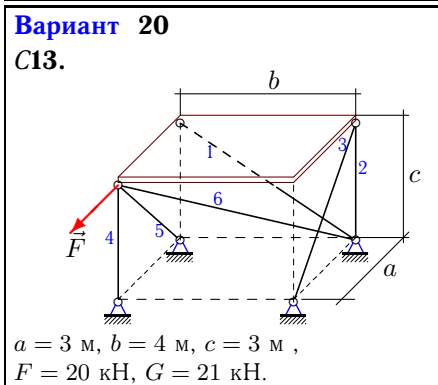
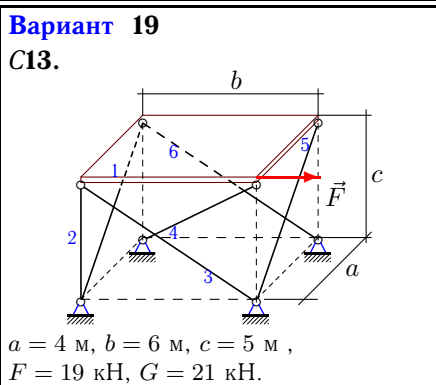
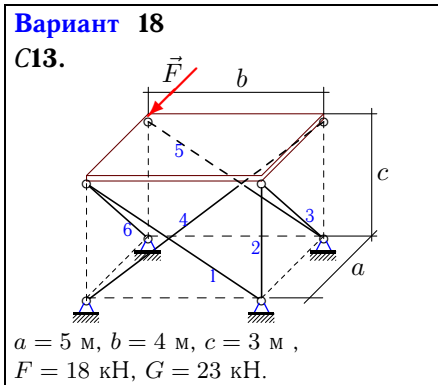
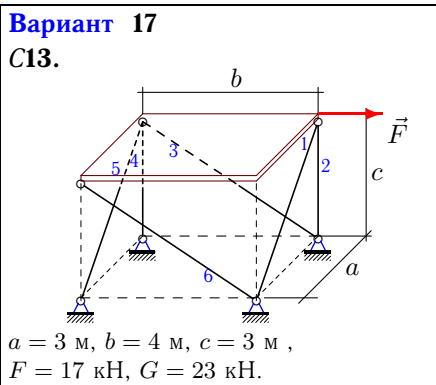
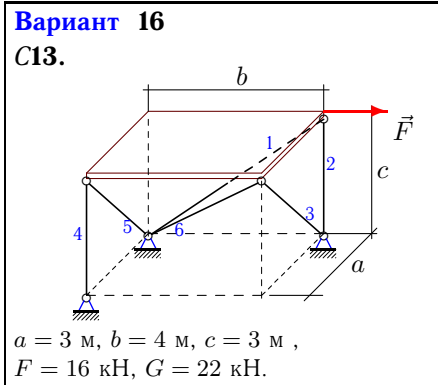
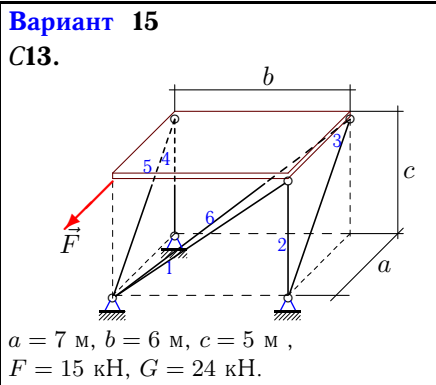
$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 13 \text{ кН}, G = 18 \text{ кН}.$

Вариант 14

С13.

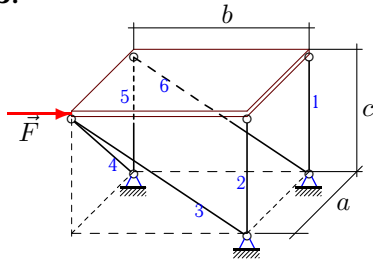


$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 14 \text{ кН}, G = 24 \text{ кН}.$



Вариант 23

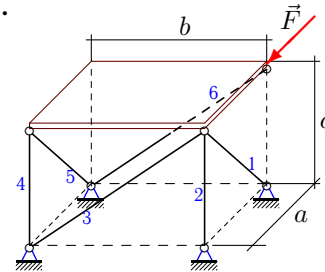
С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 23 \text{ кН}, G = 29 \text{ кН}.$

Вариант 24

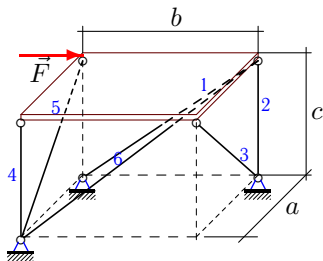
С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 24 \text{ кН}, G = 31 \text{ кН}.$

Вариант 25

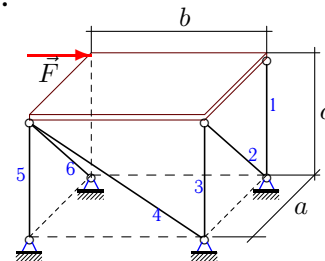
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 25 \text{ кН}, G = 31 \text{ кН}.$

Вариант 26

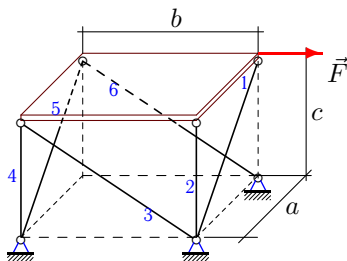
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 26 \text{ кН}, G = 33 \text{ кН}.$

Вариант 27

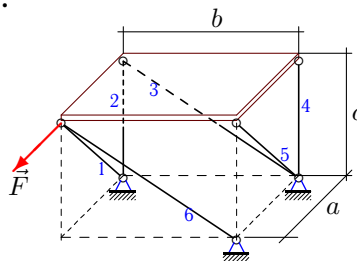
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 27 \text{ кН}, G = 29 \text{ кН}.$

Вариант 28

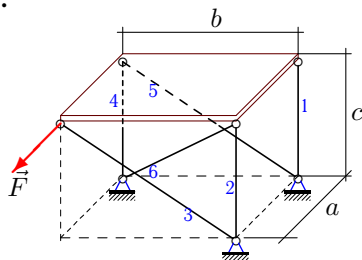
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 28 \text{ кН}, G = 31 \text{ кН}.$

Вариант 29

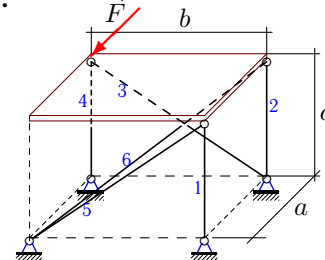
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 29 \text{ кН}, G = 33 \text{ кН}.$

Вариант 30

С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 30 \text{ кН}, G = 40 \text{ кН}.$

Ответы

	S_1	S_2	S_3	S_4	S_5	S_6
1	-5.500	-0.667	1.067	-6.167	-0.000	1.462
2	-2.775	0.000	0.521	-3.217	-2.775	-3.384
3	10.062	-12.000	11.250	0.000	-3.354	-11.250
4	-7.810	-11.500	6.403	-11.500	6.403	8.775
5	4.167	-13.333	7.169	-9.167	0.000	8.740
6	-11.786	0.000	-0.000	-7.500	7.373	0.000
7	-11.314	0.000	13.333	-23.000	21.213	-13.333
8	-13.000	6.000	0.000	-7.000	11.662	-14.142
9	-26.500	18.000	0.000	-26.500	20.125	0.000
10	-1.414	-8.000	15.000	0.000	-12.728	-15.000
11	-8.004	-1.250	-9.763	0.000	-9.605	9.763
12	0.000	-7.500	0.000	-17.500	15.620	0.000
13	-28.000	0.000	32.653	-25.800	28.000	-17.493
14	-1.041	-10.000	-1.147	-2.797	-1.041	-18.352
15	0.000	-12.000	0.000	-1.286	-18.434	-0.000
16	20.000	-23.000	0.000	-11.000	0.000	0.000
17	-16.263	0.000	-2.083	-10.250	16.263	-19.167
18	-18.389	0.000	-0.454	-26.556	-0.389	-0.454
19	-4.482	15.833	-30.200	-12.285	-4.482	-5.467
20	0.000	-10.500	0.000	-30.500	28.284	0.000
21	0.000	-55.500	52.500	-55.500	-0.000	56.544
22	-16.000	28.638	-18.333	0.000	-16.000	0.000
23	-17.250	2.750	-28.750	0.000	2.750	0.000
24	58.115	-45.400	25.833	-0.000	-30.127	-25.833
25	31.250	-34.250	0.000	-15.500	0.000	0.000
26	-16.500	38.759	-34.667	-43.333	52.833	-38.759
27	-8.132	-8.750	-9.583	0.000	8.132	-24.167
28	-27.943	0.000	54.693	-49.667	61.595	-54.693
29	-0.000	-74.500	-0.000	-74.500	72.500	78.085
30	-80.000	60.000	0.000	-20.000	75.000	-80.777