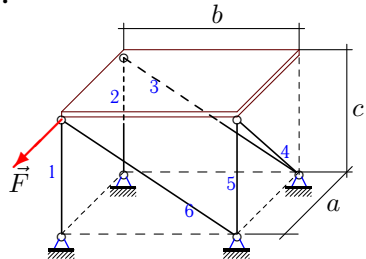
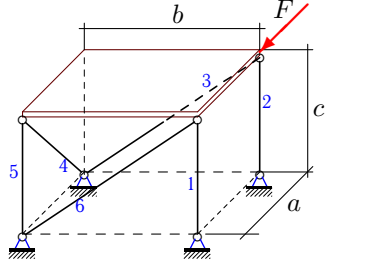
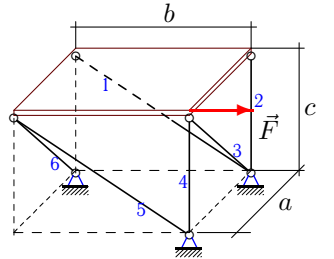
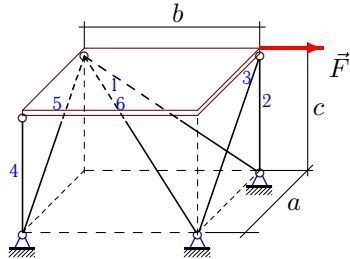
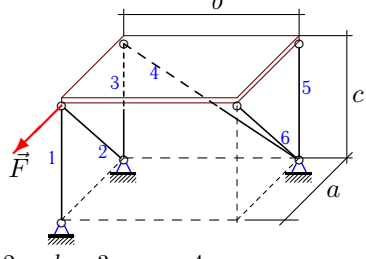
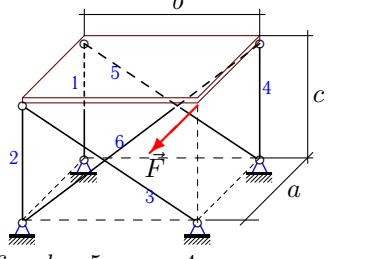
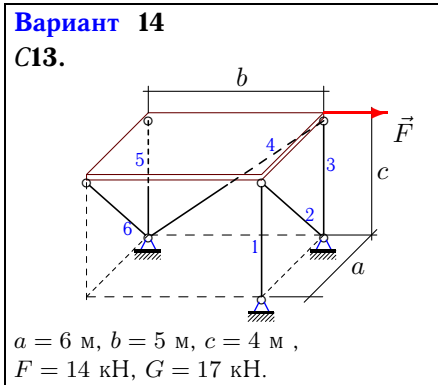
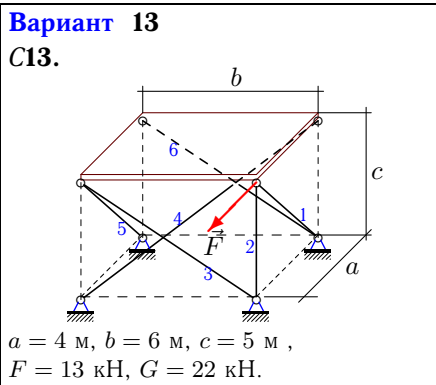
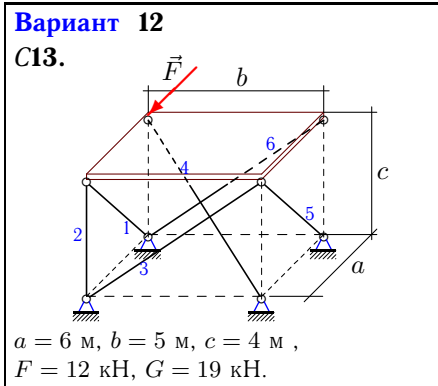
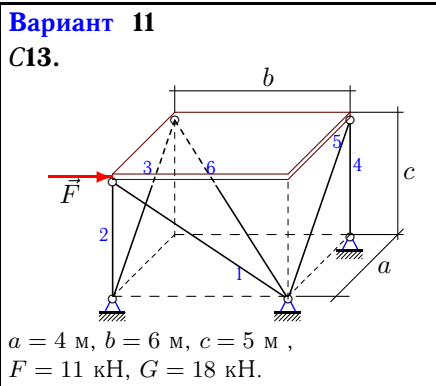
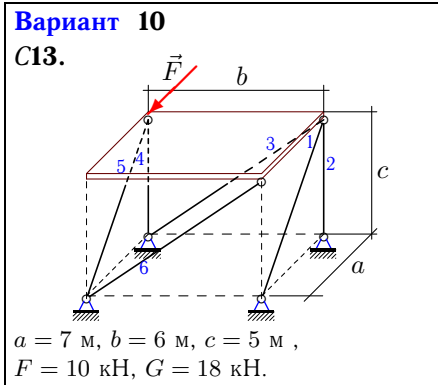
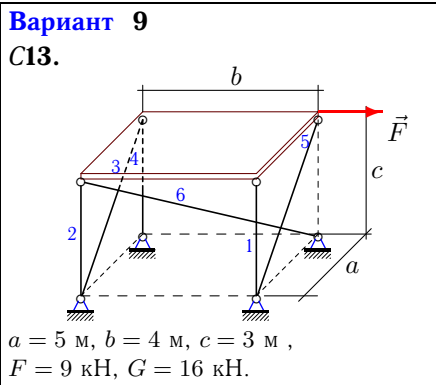
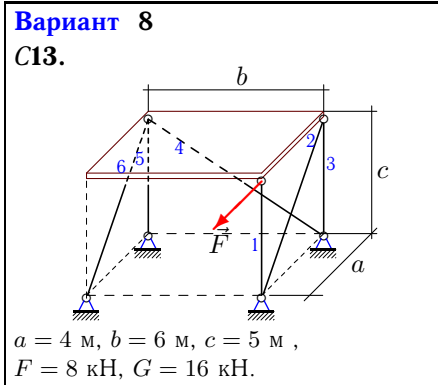
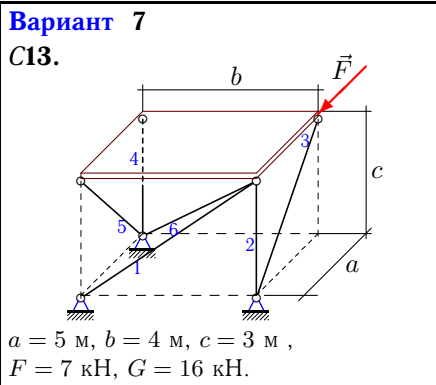


Определение усилий в стержнях, поддерживающих плиту

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).

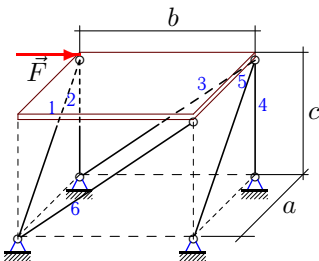
Кирсанов М.Н. Решебник. Теоретическая механика с. 101.

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



Вариант 15

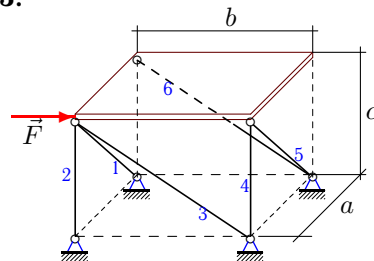
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 15 \text{ кН}, G = 23 \text{ кН}.$

Вариант 16

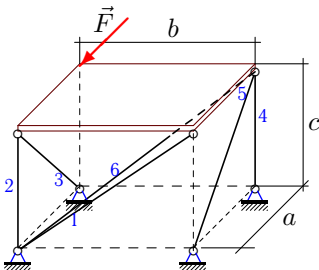
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 16 \text{ кН}, G = 25 \text{ кН}.$

Вариант 17

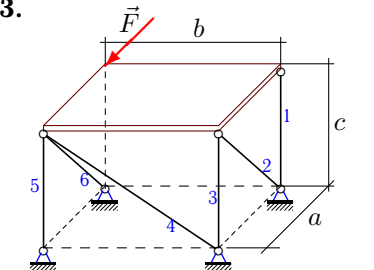
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 17 \text{ кН}, G = 19 \text{ кН}.$

Вариант 18

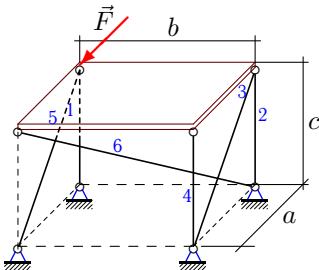
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 18 \text{ кН}, G = 25 \text{ кН}.$

Вариант 19

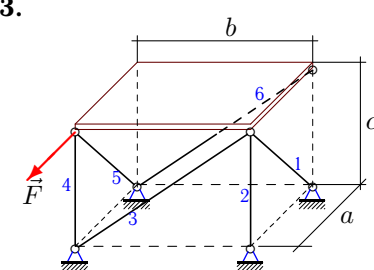
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 19 \text{ кН}, G = 20 \text{ кН}.$

Вариант 20

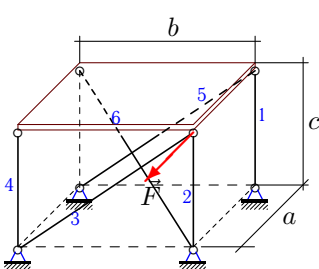
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 20 \text{ кН}, G = 27 \text{ кН}.$

Вариант 21

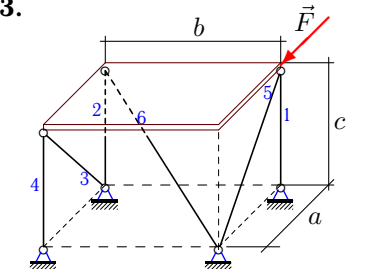
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 21 \text{ кН}, G = 26 \text{ кН}.$

Вариант 22

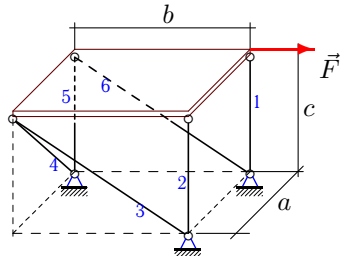
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 22 \text{ кН}, G = 28 \text{ кН}.$

Вариант 23

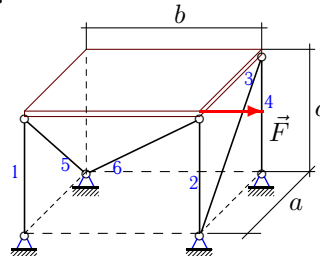
С13.



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

Вариант 24

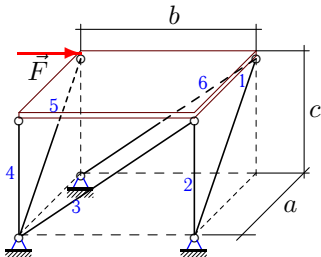
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 24 \text{ кН}, G = 31 \text{ кН}.$

Вариант 25

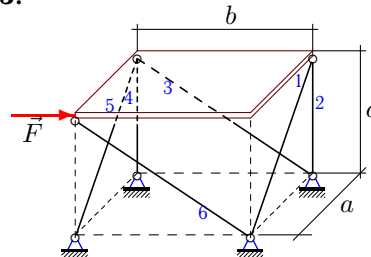
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 25 \text{ кН}, G = 29 \text{ кН}.$

Вариант 26

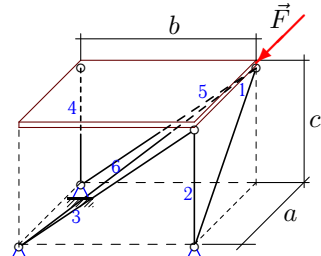
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 26 \text{ кН}, G = 32 \text{ кН}.$

Вариант 27

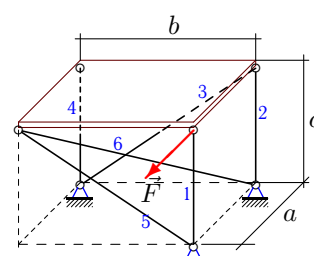
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 27 \text{ кН}, G = 32 \text{ кН}.$

Вариант 28

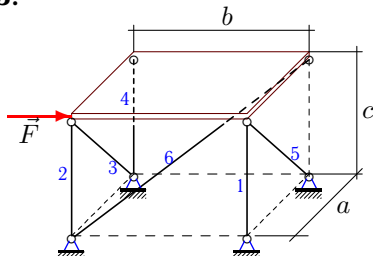
С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 28 \text{ кН}, G = 33 \text{ кН}.$

Вариант 29

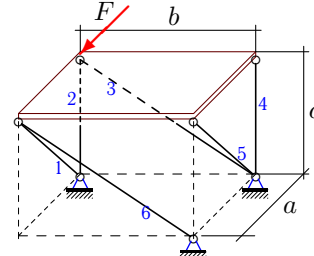
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 29 \text{ кН}, G = 31 \text{ кН}.$

Вариант 30

С13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 30 \text{ кН}, G = 33 \text{ кН}.$

Ответы

	S_1	S_2	S_3	S_4	S_5	S_6
1	1.250	-2.750	1.953	1.601	-2.750	-1.953
2	2.500	-5.500	3.905	3.202	-5.500	-3.905
3	2.917	-5.750	2.475	0.000	-6.667	-2.475
4	0.000	-2.500	0.000	-2.500	4.243	-5.831
5	-13.000	11.180	0.000	0.000	-3.000	0.000
6	4.000	-6.500	0.000	-2.500	-6.403	-8.775
7	-7.000	-8.000	-0.000	-8.000	-0.000	9.899
8	-8.000	-12.806	10.000	0.000	-8.000	0.000
9	-1.250	-0.000	0.000	-1.250	-13.120	-15.910
10	15.484	-18.000	14.058	7.143	-27.773	-14.058
11	-14.319	0.167	0.000	-9.000	0.000	0.000
12	8.713	-8.000	-5.069	-13.894	-5.709	-5.069
13	16.115	-16.250	-5.728	-12.870	-4.696	-5.728
14	-8.500	0.000	-11.200	17.929	-8.500	0.000
15	-12.857	0.000	39.375	-43.000	12.857	-14.375
16	22.535	-12.200	-0.480	0.000	-22.535	-20.010
17	0.000	-26.500	24.042	-9.500	0.000	0.000
18	-12.500	0.000	0.000	0.000	-48.500	40.249
19	28.000	0.000	0.000	-10.000	-42.485	0.000
20	15.093	-27.000	16.875	-40.000	29.628	-16.875
21	2.000	0.000	-23.431	2.000	0.000	-31.464
22	13.500	-0.000	0.000	-14.000	-35.217	0.000
23	0.000	-14.500	0.000	0.000	2.750	-28.750
24	-15.500	-19.200	34.613	-34.700	-0.000	42.120
25	-60.790	0.000	55.192	-49.833	60.790	-22.650
26	20.870	-34.667	-23.333	37.333	-20.870	-20.000
27	0.000	-16.000	0.000	-16.000	52.719	-59.231
28	-33.300	-0.000	28.000	-33.300	-0.000	39.598
29	-54.167	0.000	43.231	-54.167	0.000	52.057
30	-32.070	-0.000	57.500	-51.000	67.056	-57.500