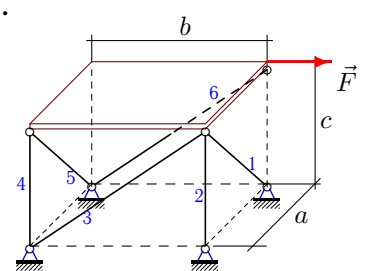
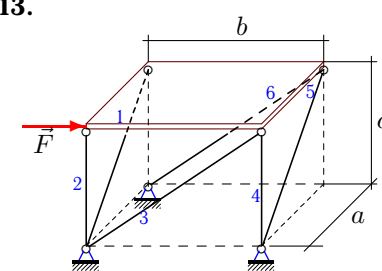
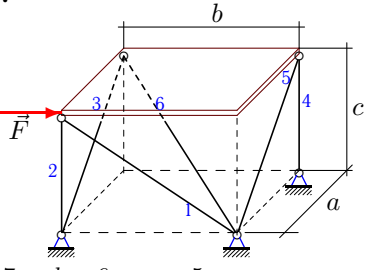
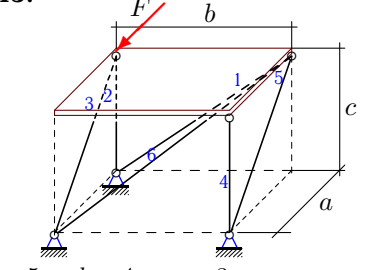
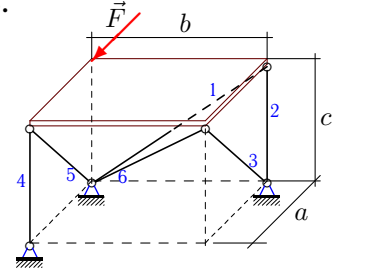
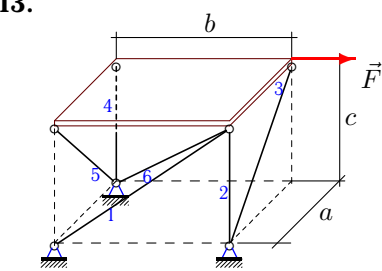


Определение усилий в стержнях, поддерживающих плиту

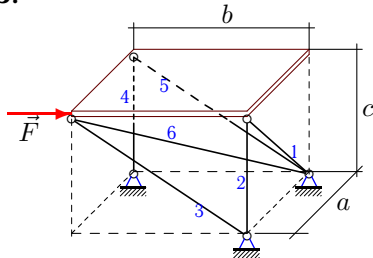
Однородная прямоугольная горизонтальная плита весом G опирается на шесть невесомых шарнирно закрепленных по концам стержней. Вдоль ребра плиты действует сила F . Определить усилия в стержнях (в кН).

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

Вариант 7

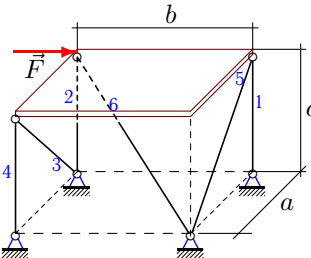
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 7 \text{ кН}, G = 17 \text{ кН}.$

Вариант 8

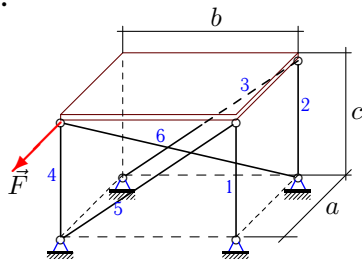
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 8 \text{ кН}, G = 14 \text{ кН}.$

Вариант 9

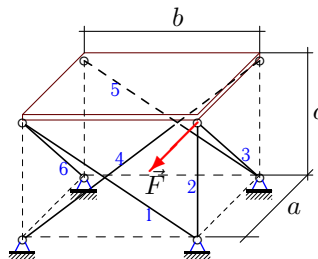
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 9 \text{ кН}, G = 15 \text{ кН}.$

Вариант 10

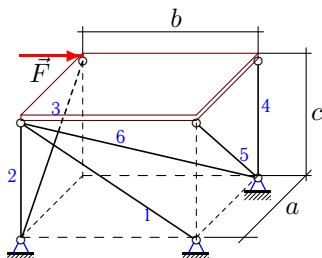
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 10 \text{ кН}, G = 15 \text{ кН}.$

Вариант 11

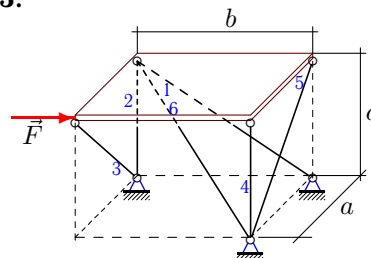
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 11 \text{ кН}, G = 18 \text{ кН}.$

Вариант 12

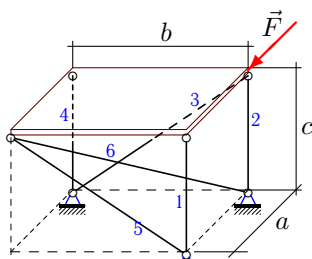
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 12 \text{ кН}, G = 20 \text{ кН}.$

Вариант 13

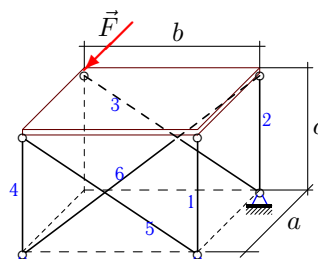
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 13 \text{ кН}, G = 18 \text{ кН}.$

Вариант 14

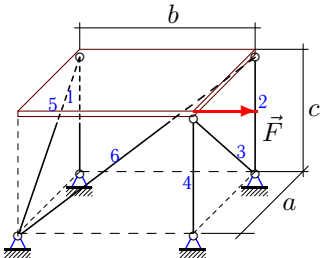
С13.



$a = 6 \text{ м}, b = 5 \text{ м}, c = 4 \text{ м},$
 $F = 14 \text{ кН}, G = 15 \text{ кН}.$

Вариант 15

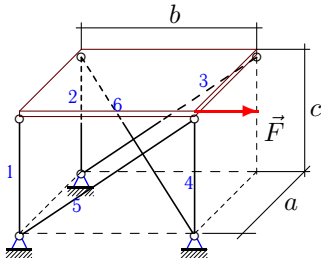
C13.



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

Вариант 16

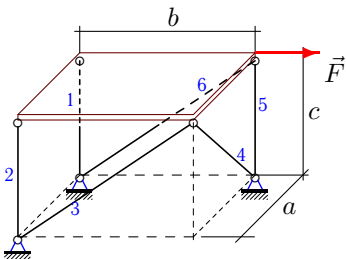
C13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 16 \text{ кН}, G = 19 \text{ кН}.$

Вариант 17

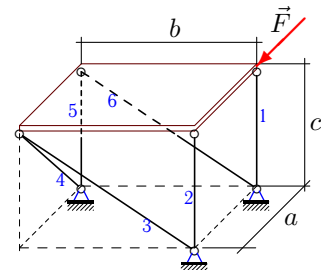
C13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 17 \text{ кН}, G = 25 \text{ кН}.$

Вариант 18

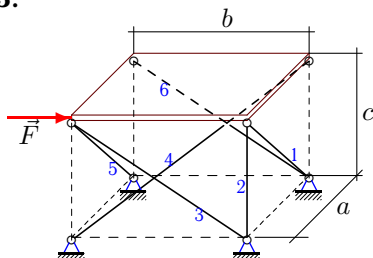
C13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 18 \text{ кН}, G = 24 \text{ кН}.$

Вариант 19

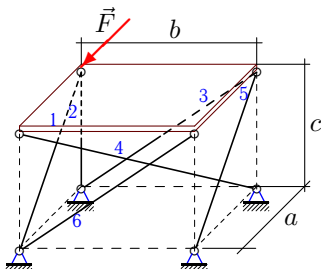
C13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 19 \text{ кН}, G = 28 \text{ кН}.$

Вариант 20

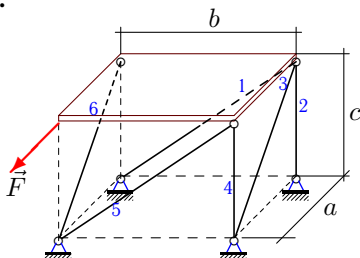
C13.



$a = 5 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 20 \text{ кН}, G = 28 \text{ кН}.$

Вариант 21

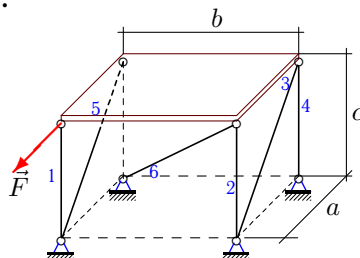
C13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 21 \text{ кН}, G = 31 \text{ кН}.$

Вариант 22

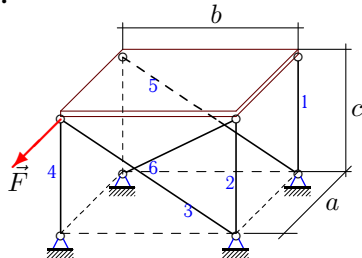
C13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 22 \text{ кН}, G = 31 \text{ кН}.$

Вариант 23

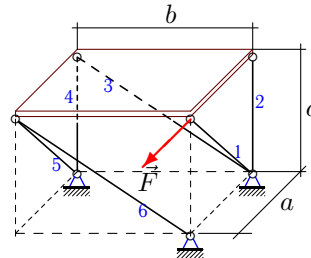
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 23 \text{ кН}, G = 33 \text{ кН}.$

Вариант 24

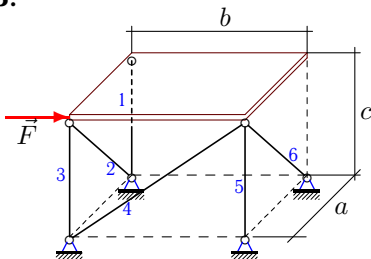
С13.



$a = 2 \text{ м}, b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 24 \text{ кН}, G = 27 \text{ кН}.$

Вариант 25

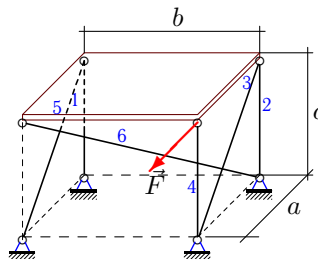
С13.



$a = 3 \text{ м}, b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 25 \text{ кН}, G = 34 \text{ кН}.$

Вариант 26

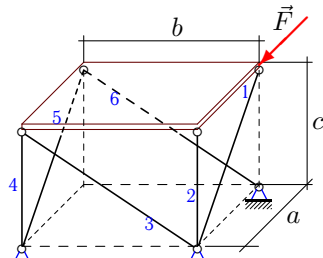
С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 26 \text{ кН}, G = 27 \text{ кН}.$

Вариант 27

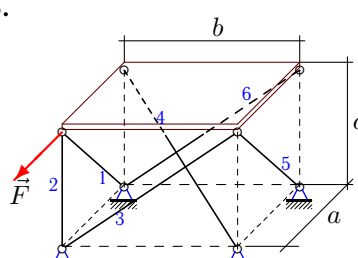
С13.



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

Вариант 28

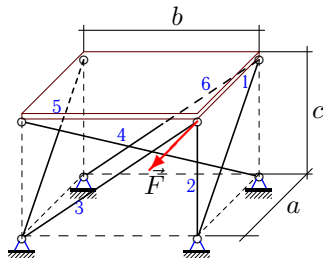
С13.



$a = 4 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 28 \text{ кН}, G = 35 \text{ кН}.$

Вариант 29

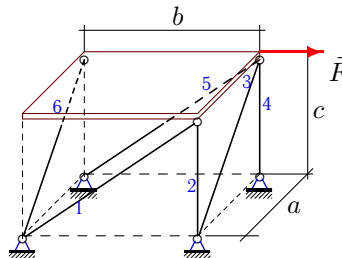
С13.



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

Вариант 30

С13.



$a = 7 \text{ м}, b = 6 \text{ м}, c = 5 \text{ м},$
 $F = 30 \text{ кН}, G = 40 \text{ кН}.$

Ответы

	S_1	S_2	S_3	S_4	S_5	S_6
1	8.316	-9.667	7.550	0.833	-8.316	-6.248
2	5.161	-6.000	7.290	-1.667	-5.161	-4.686
3	-3.905	-2.500	0.000	-5.000	0.000	0.000
4	0.000	-1.100	-4.665	-3.500	0.000	0.000
5	0.000	-5.500	-0.000	-8.500	5.831	-0.000
6	7.500	-7.500	-6.364	-3.000	-6.364	0.000
7	-7.425	-3.250	-8.750	-3.250	-8.750	10.204
8	-7.000	6.667	-8.537	-0.333	0.000	-11.700
9	-11.250	-7.500	0.000	-18.750	17.573	19.744
10	-4.002	-6.667	7.512	-10.969	-4.002	-4.507
11	-14.319	-9.000	11.739	-18.167	11.739	0.000
12	-15.620	-10.000	12.806	-20.000	12.806	-0.000
13	-17.667	-0.000	13.873	-17.667	0.000	19.012
14	0.000	1.833	-0.000	1.833	-14.941	-20.475
15	8.500	-20.000	0.000	-11.500	-22.361	26.926
16	0.000	-9.500	0.000	-30.833	26.667	0.000
17	0.000	-12.500	0.000	0.000	-25.250	21.250
18	36.000	-48.000	30.000	25.456	-30.000	-30.000
19	-17.109	0.000	-15.534	-8.507	10.132	-15.534
20	-32.394	12.000	-7.778	-21.999	-9.070	-7.778
21	-9.167	11.000	-7.778	-21.000	9.167	-21.920
22	0.214	-15.714	0.000	0.214	-27.036	0.000
23	-45.250	0.000	0.000	-45.250	44.909	50.456
24	122.425	-123.000	76.875	48.000	-68.759	-76.875
25	-17.000	-0.000	-0.000	31.250	-35.750	0.000
26	-13.500	18.571	-31.951	-13.500	-0.000	0.000
27	-55.861	25.000	-20.833	-27.000	17.678	20.833
28	37.352	-35.000	-9.112	-20.475	-7.470	-9.112
29	-21.449	0.000	-25.278	-2.592	-21.449	23.056
30	-31.241	0.000	34.409	-65.000	70.292	-34.409