

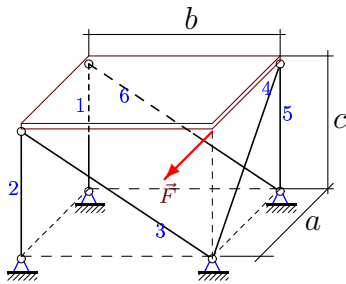
Равновесие плиты

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. **Решebник. Теоретическая механика**/Под ред. А. И. Кириллова. – М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.101.)

Задача S-13.1.

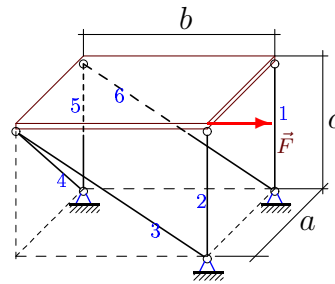
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$a = b = 12$ м, $c = 5$ м,
 $F = 12$ кН, $G = 50$ кН.

Задача S-13.2.

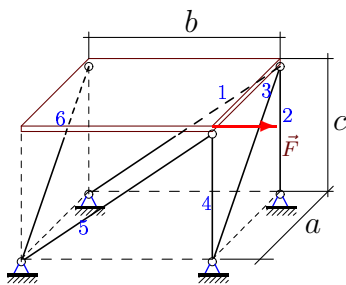
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$a = b = 8$ м, $c = 15$ м,
 $F = 8$ кН, $G = 20$ кН.

Задача S-13.3.

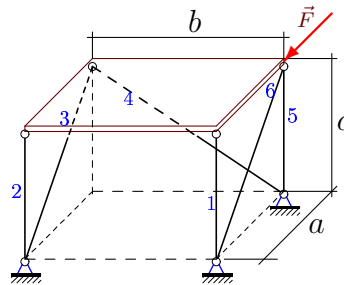
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$a = b = 3$ м, $c = 4$ м,
 $F = 3$ кН, $G = 8$ кН.

Задача S-13.4.

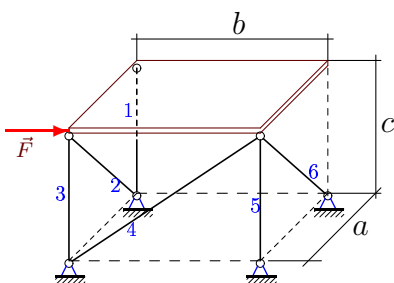
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$a = b = 5$ м, $c = 12$ м,
 $F = 5$ кН, $G = 48$ кН.

Задача S-13.5.

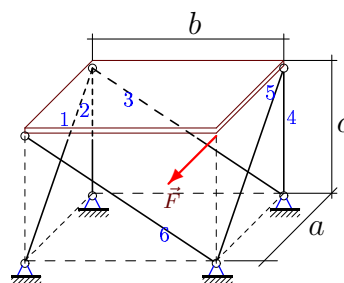
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$a = b = 3$ м, $c = 4$ м,
 $F = 3$ кН, $G = 16$ кН.

Задача S-13.6.

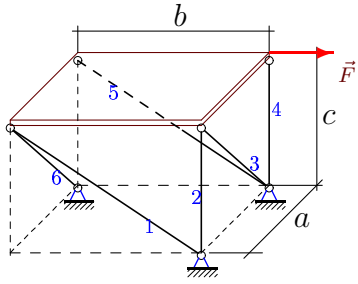
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$a = b = 3$ м, $c = 4$ м,
 $F = 18$ кН, $G = 40$ кН.

Задача S-13.7.

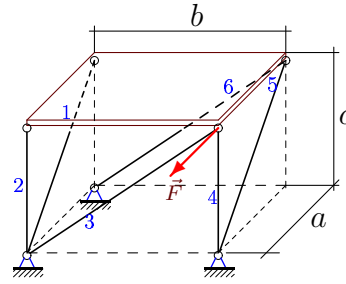
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$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 5 \text{ кН}, G = 72 \text{ кН}.$

Задача S-13.8.

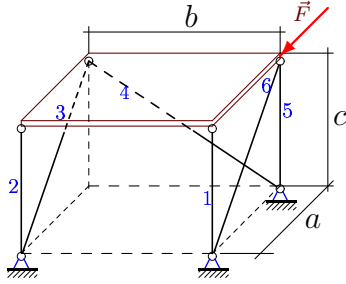
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$a = b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 8 \text{ кН}, G = 30 \text{ кН}.$

Задача S-13.9.

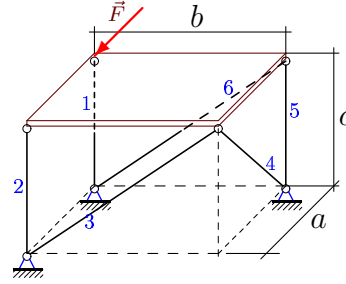
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$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 12 \text{ кН}, G = 10 \text{ кН}.$

Задача S-13.10.

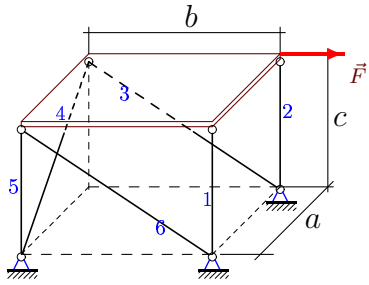
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$a = b = 8 \text{ м}, c = 15 \text{ м},$
 $F = 32 \text{ кН}, G = 90 \text{ кН}.$

Задача S-13.11.

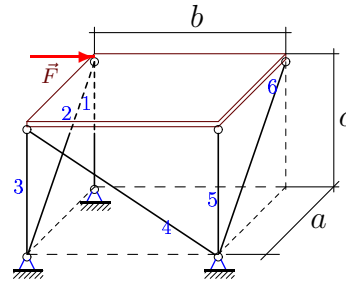
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$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 5 \text{ кН}, G = 24 \text{ кН}.$

Задача S-13.12.

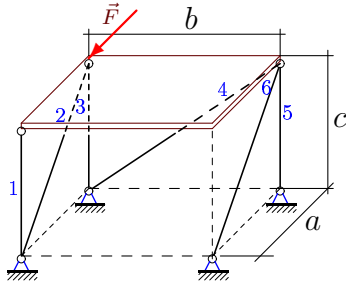
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$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 35 \text{ кН}, G = 48 \text{ кН}.$

Задача S-13.13.

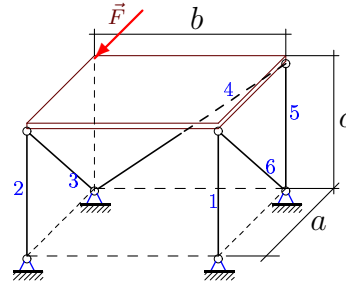
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$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 36 \text{ кН}, G = 70 \text{ кН}.$

Задача S-13.14.

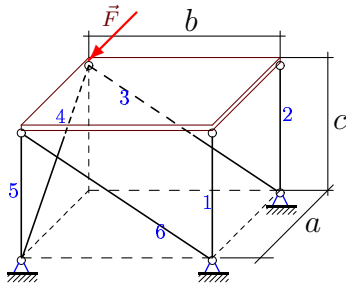
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$a = b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 9 \text{ кН}, G = 28 \text{ кН}.$

Задача S-13.15.

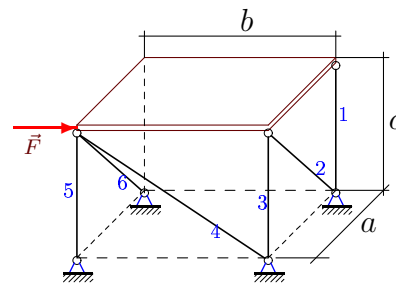
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$a = b = 8 \text{ м}, c = 15 \text{ м},$
 $F = 8 \text{ кН}, G = 210 \text{ кН}.$

Задача S-13.16.

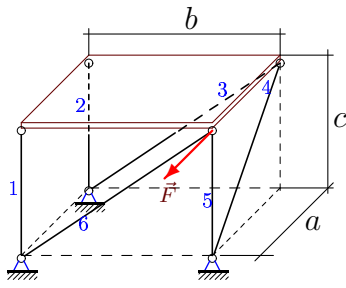
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$a = b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 4 \text{ кН}, G = 12 \text{ кН}.$

Задача S-13.17.

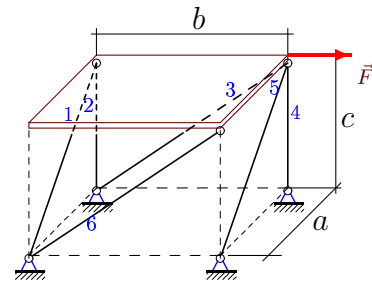
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$a = b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 3 \text{ кН}, G = 16 \text{ кН}.$

Задача S-13.18.

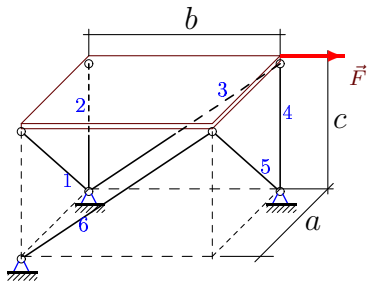
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$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 12 \text{ кН}, G = 30 \text{ кН}.$

Задача S-13.19.

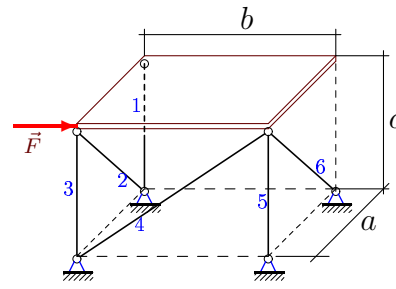
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$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 25 \text{ кН}, G = 24 \text{ кН}.$

Задача S-13.20.

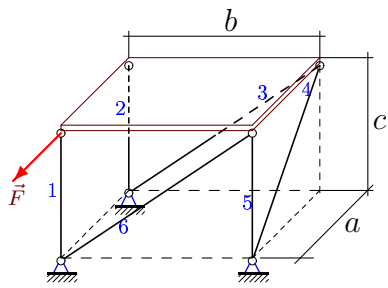
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$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 5 \text{ кН}, G = 60 \text{ кН}.$

Задача S-13.21.

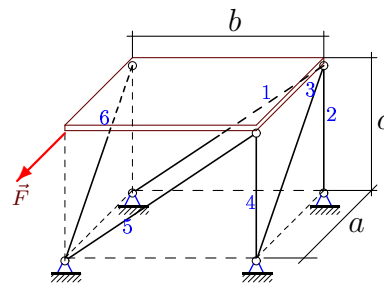
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$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 5 \text{ кН}, G = 84 \text{ кН}.$

Задача S-13.22.

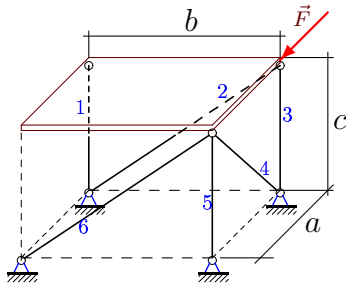
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$a = b = 15 \text{ м}, c = 8 \text{ м},$
 $F = 15 \text{ кН}, G = 16 \text{ кН}.$

Задача S-13.23.

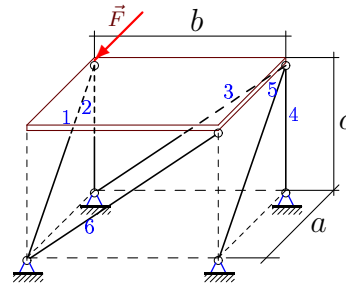
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$a = b = 8 \text{ м}, c = 15 \text{ м},$
 $F = 8 \text{ кН}, G = 12 \text{ кН}.$

Задача S-13.24.

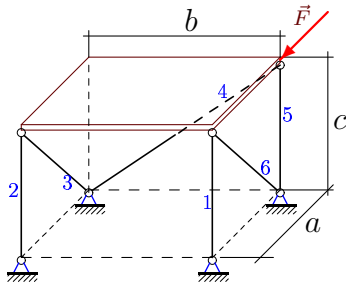
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$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 24 \text{ кН}, G = 30 \text{ кН}.$

Задача S-13.25.

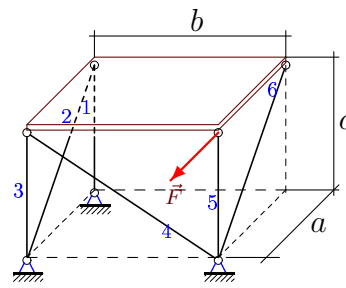
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$a = b = 8 \text{ м}, c = 15 \text{ м},$
 $F = 16 \text{ кН}, G = 50 \text{ кН}.$

Задача S-13.26.

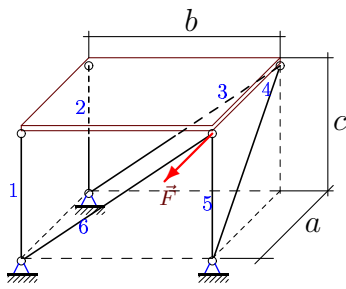
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$a = b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 20 \text{ кН}, G = 42 \text{ кН}.$

Задача S-13.27.

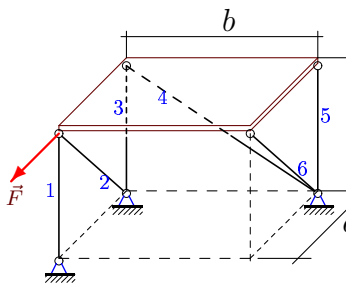
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$a = b = 8 \text{ м}, c = 15 \text{ м},$
 $F = 8 \text{ кН}, G = 210 \text{ кН}.$

Задача S-13.28.

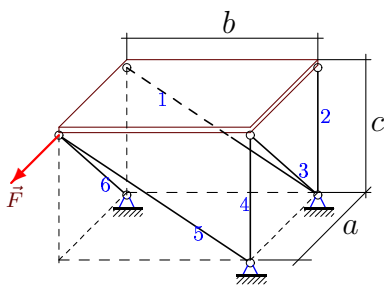
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$a = b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 9 \text{ кН}, G = 16 \text{ кН}.$

Задача S-13.29.

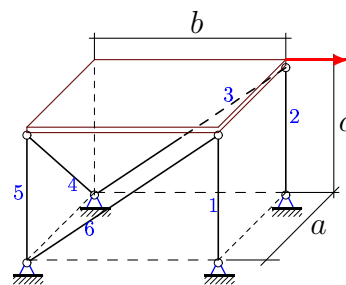
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$a = b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 4 \text{ кН}, G = 6 \text{ кН}.$

Задача S-13.30.

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$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 36 \text{ кН}, G = 40 \text{ кН}.$

S-13

Ответы.
 Равновесие плиты

16.02.2015

№	S_1	S_2	S_3	S_4	S_5	S_6
1	0	-25	0	-13	-20	0
2	-15	5	-17	0	5	0
3	5	-8	5	-4	0	-5
4	0	-24	0	0	-12	-13
5	-8	0	0	5	-12	0
6	25	-40	25	24	-55	-25
7	-26	-12	26	-48	13	-26
8	15	-24	15	0	-25	-15
9	0	-5	0	0	0	-13
10	120	-165	68	68	-105	-68
11	-12	0	-13	0	0	0
12	-24	91	0	-91	60	-91
13	-35	-39	15	0	-35	0
14	0	-26	15	0	-14	0
15	-15	-90	0	-17	-90	0
16	-6	0	0	-5	-3	0
17	-4	-4	0	-5	-4	0
18	-39	0	52	-35	39	-39
19	13	-24	78	-60	-13	-13
20	-30	0	0	13	-42	0
21	-24	-18	-13	-13	-30	13
22	0	0	0	-8	0	-17
23	-6	0	0	17	-21	0
24	-65	10	39	-30	39	-39
25	-30	-25	0	0	-25	34
26	-6	0	-15	0	-6	-25
27	-15	-90	0	-17	-90	0
28	-20	15	0	0	-8	0
29	10	-9	10	0	-10	-5
30	0	-35	39	0	-20	0

S-13 файл о13s10A