

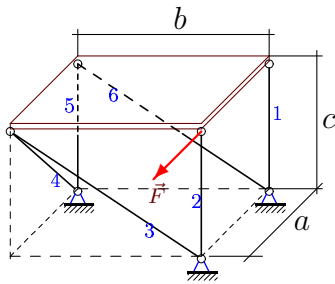
Равновесие плиты

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.

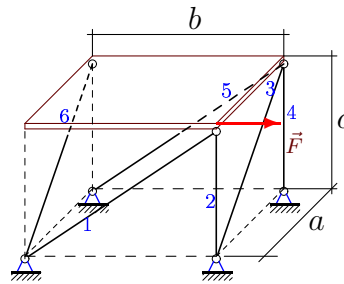
6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 35 \text{ кН}, G = 24 \text{ кН}.$

Задача S-13.2.

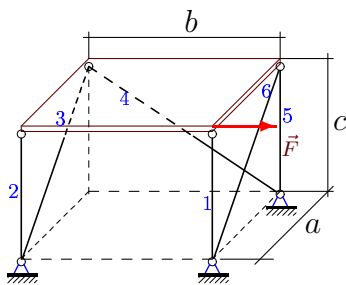
6



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

Задача S-13.3.

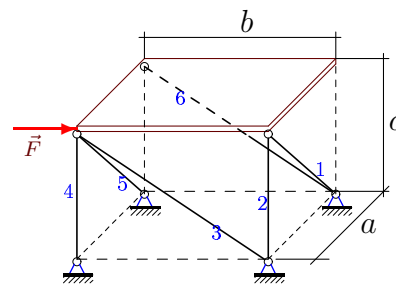
6



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

Задача S-13.4.

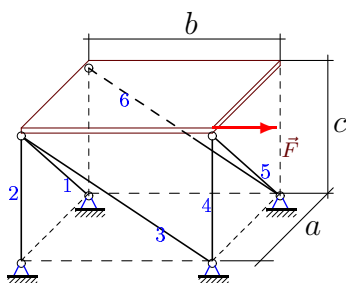
6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 15 \text{ кН}, G = 168 \text{ кН}.$

Задача S-13.5.

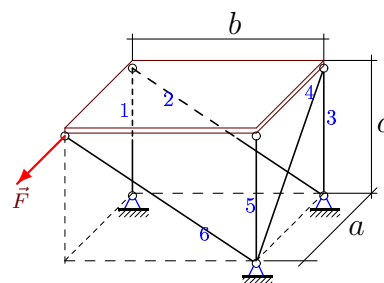
6



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

Задача S-13.6.

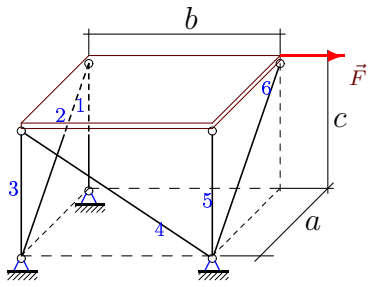
6



$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 12 \text{ кН}, G = 50 \text{ кН}.$

Задача S-13.7.

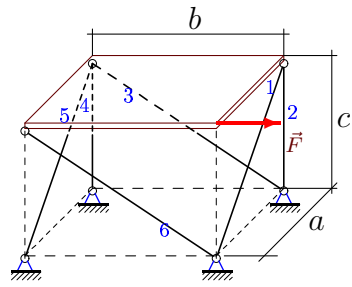
6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 35 \text{ кН}, G = 144 \text{ кН}.$

Задача S-13.8.

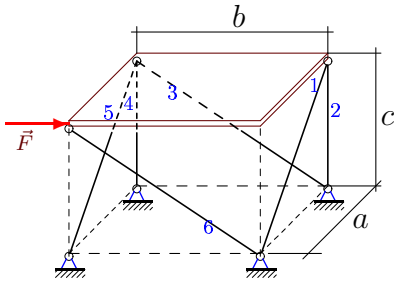
6



$a = b = 15 \text{ м}, c = 8 \text{ м},$
 $F = 90 \text{ кН}, G = 112 \text{ кН}.$

Задача S-13.9.

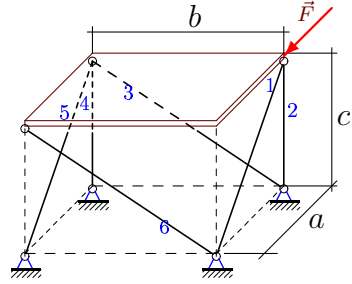
6



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

Задача S-13.10.

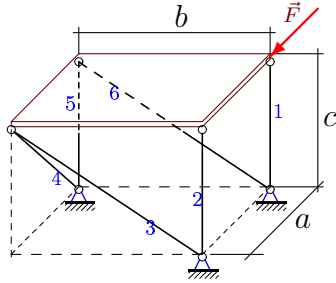
6



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

Задача S-13.11.

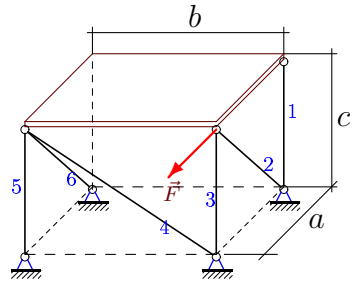
6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 5 \text{ кН}, G = 28 \text{ кН}.$

Задача S-13.12.

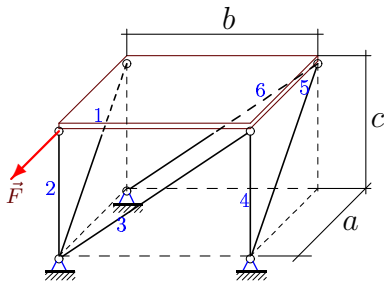
6



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

Задача S-13.13.

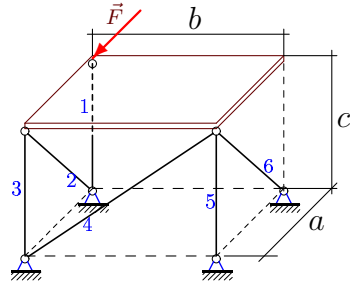
6



$a = b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 16 \text{ кН}, G = 42 \text{ кН}.$

Задача S-13.14.

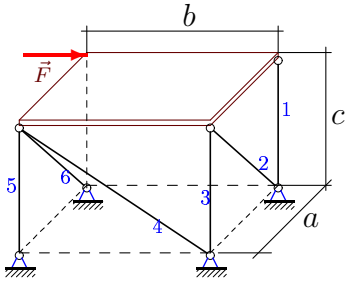
6



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

Задача S-13.15.

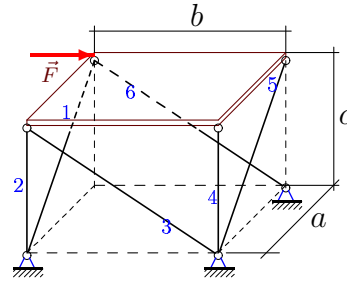
6



$a = b = 4 \text{ м}, c = 3 \text{ м},$
 $F = 20 \text{ кН}, G = 24 \text{ кН}.$

Задача S-13.16.

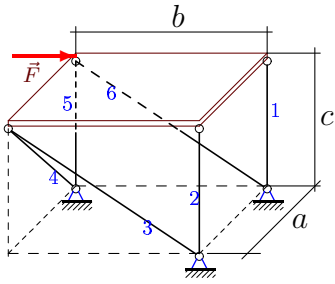
6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 10 \text{ кН}, G = 72 \text{ кН}.$

Задача S-13.17.

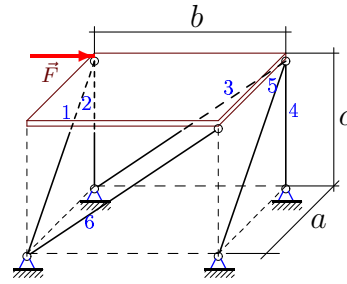
6



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

Задача S-13.18.

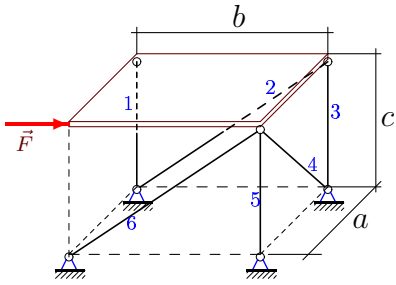
6



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

Задача S-13.19.

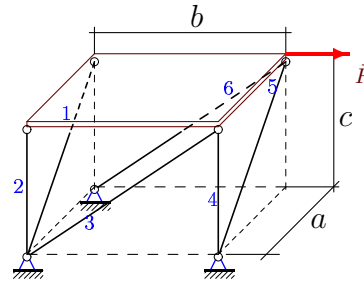
6



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

Задача S-13.20.

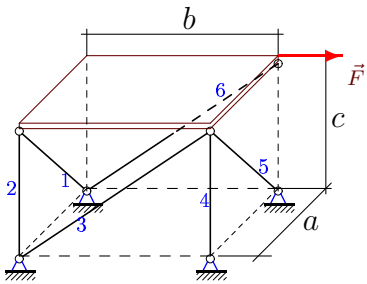
6



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

Задача S-13.21.

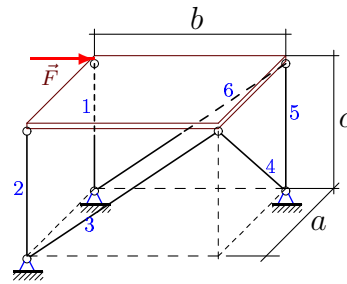
6



$a = b = 15 \text{ м}, c = 8 \text{ м},$
 $F = 60 \text{ кН}, G = 80 \text{ кН}.$

Задача S-13.22.

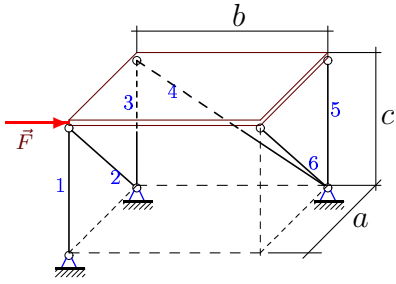
6



$a = b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 15 \text{ кН}, G = 32 \text{ кН}.$

Задача S-13.23.

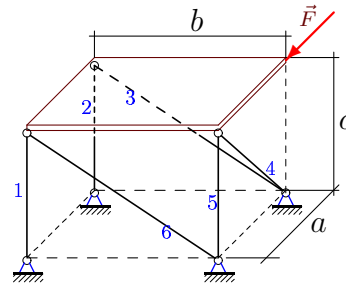
6



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

Задача S-13.24.

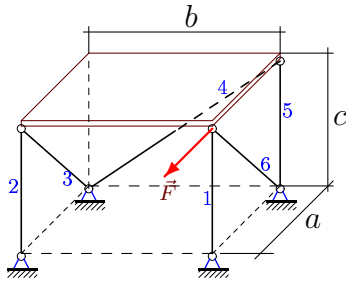
6



$a = b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 15 \text{ кН}, G = 24 \text{ кН}.$

Задача S-13.25.

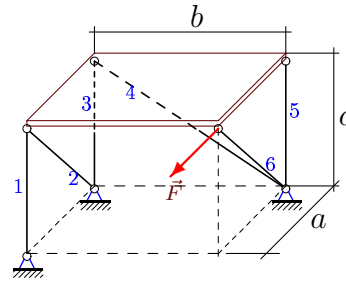
6



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

Задача S-13.26.

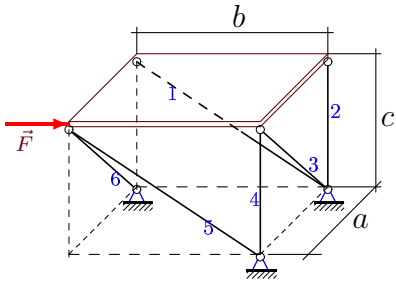
6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 5 \text{ кН}, G = 96 \text{ кН}.$

Задача S-13.27.

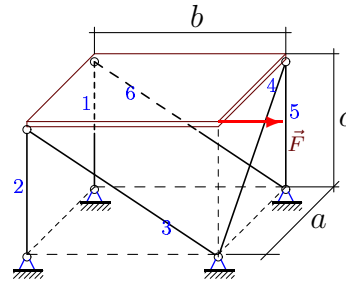
6



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

Задача S-13.28.

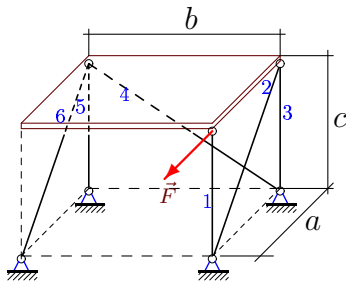
6



$a = b = 3 \text{ м}, c = 4 \text{ м},$
 $F = 9 \text{ кН}, G = 20 \text{ кН}.$

Задача S-13.29.

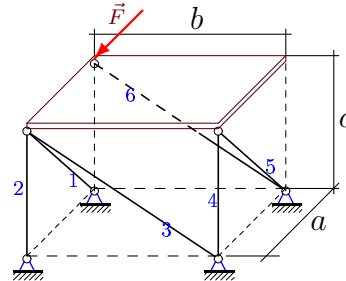
6



$a = b = 12 \text{ м}, c = 5 \text{ м},$
 $F = 36 \text{ кН}, G = 20 \text{ кН}.$

Задача S-13.30.

6



$a = b = 5 \text{ м}, c = 12 \text{ м},$
 $F = 15 \text{ кН}, G = 96 \text{ кН}.$

S-13

Ответы.
Равновесие плиты

16.02.2015

№	S_1	S_2	S_3	S_4	S_5	S_6
1	168	-180	91	91	-96	-91
2	0	-5	13	-10	13	-13
3	-10	5	-13	-13	0	13
4	-91	0	52	-132	91	-91
5	34	-24	17	0	-34	-34
6	-25	13	0	-13	-20	-13
7	-72	91	0	-91	12	-91
8	-17	-48	17	-16	17	-119
9	-13	-5	13	-10	13	-26
10	-78	60	13	-24	13	-13
11	24	-38	13	13	-26	-13
12	-4	5	-4	0	-4	0
13	-5	-18	15	-12	-15	-15
14	-9	5	-3	0	-9	0
15	-12	25	-15	-25	18	-25
16	-13	0	13	-48	13	-39
17	0	-12	0	0	0	-13
18	-15	0	20	-21	15	-15
19	-3	0	0	0	-7	5
20	39	-25	39	0	-39	-26
21	-153	32	153	-144	153	-85
22	0	-16	0	0	-36	25
23	-4	5	0	-5	0	-5
24	0	-12	0	25	-32	0
25	-4	-4	0	0	-4	5
26	-60	0	12	0	-60	13
27	0	-5	0	0	-13	0
28	0	2	-15	0	-10	0
29	-10	-39	15	0	-10	0
30	91	-132	52	0	-52	-52

S-13 файл о13s6A