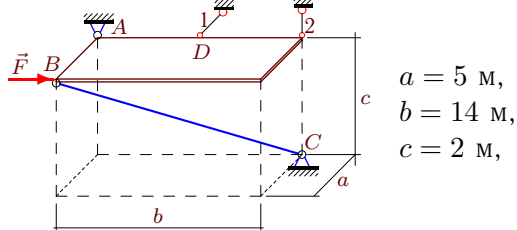


Равновесие полки

Горизонтальная однородная прямоугольная полка весом G имеет в точке A сферическую опору и поддерживается двумя невесомыми, шарнирно закрепленными по концам стержнями (горизонтальным 1 и вертикальным 2) и подпоркой BC . К полке приложена сила F , направленная вдоль одного из ее ребер. Определить реакции опор (в кН).

Кирсанов М.Н. **Решebник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2008.– 384 с. (с.106.)

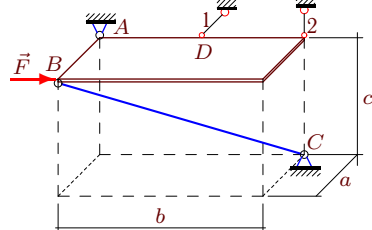
Задача 14.1.



$$\begin{aligned} a &= 5 \text{ м}, \\ b &= 14 \text{ м}, \\ c &= 2 \text{ м}, \end{aligned}$$

$$AD = 7 \text{ м}, G = 28 \text{ кН}, F = 14 \text{ кН}.$$

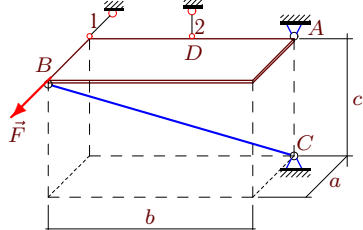
Задача 14.2.



$$\begin{aligned} a &= 6 \text{ м}, \\ b &= 9 \text{ м}, \\ c &= 2 \text{ м}, \end{aligned}$$

$$AD = 4 \text{ м}, G = 16 \text{ кН}, F = 2 \text{ кН}.$$

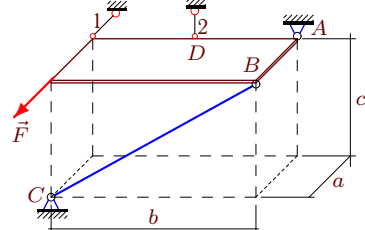
Задача 14.3.



$$\begin{aligned} a &= 5 \text{ м}, \\ b &= 14 \text{ м}, \\ c &= 2 \text{ м}, \end{aligned}$$

$$AD = 7 \text{ м}, G = 4 \text{ кН}, F = 28 \text{ кН}.$$

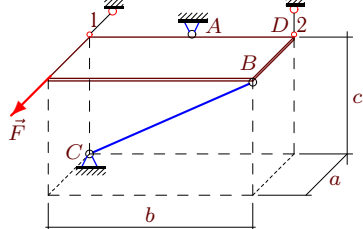
Задача 14.4.



$$\begin{aligned} a &= 28 \text{ м}, \\ b &= 24 \text{ м}, \\ c &= 7 \text{ м}, \end{aligned}$$

$$AD = 12 \text{ м}, G = 14 \text{ кН}, F = 1 \text{ кН}.$$

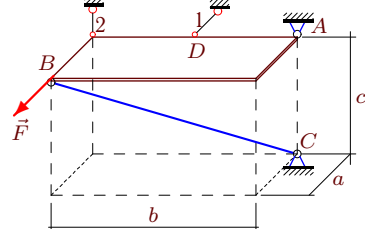
Задача 14.5.



$$\begin{aligned} a &= 2 \text{ м}, \\ b &= 2 \text{ м}, \\ c &= 1 \text{ м}, \end{aligned}$$

$$AD = 1 \text{ м}, G = 4 \text{ кН}, F = 1 \text{ кН}.$$

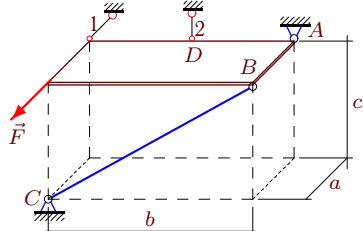
Задача 14.6.



$$\begin{aligned} a &= 2 \text{ м}, \\ b &= 2 \text{ м}, \\ c &= 1 \text{ м}, \end{aligned}$$

$$AD = 1 \text{ м}, G = 2 \text{ кН}, F = 1 \text{ кН}.$$

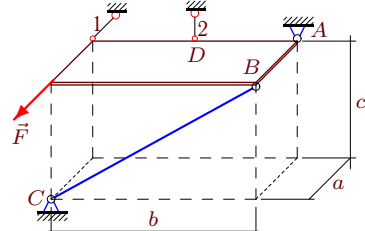
Задача 14.7.



$$\begin{aligned} a &= 21 \text{ м}, \\ b &= 15 \text{ м}, \\ c &= 8 \text{ м}, \end{aligned}$$

$$AD = 7 \text{ м}, G = 112 \text{ кН}, F = 15 \text{ кН}.$$

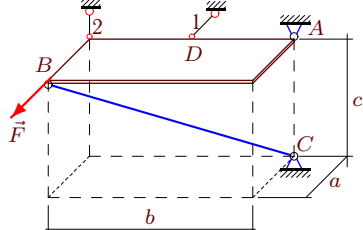
Задача 14.8.



$$\begin{aligned} a &= 10 \text{ м}, \\ b &= 8 \text{ м}, \\ c &= 6 \text{ м}, \end{aligned}$$

$$AD = 4 \text{ м}, G = 6 \text{ кН}, F = 2 \text{ кН}.$$

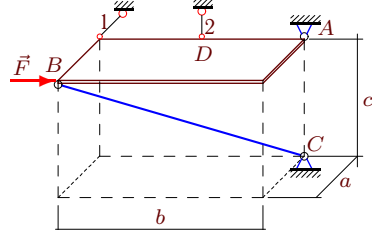
Задача 14.9.



$$\begin{aligned} a &= 7 \text{ м}, \\ b &= 6 \text{ м}, \\ c &= 6 \text{ м}, \end{aligned}$$

$$AD = 3 \text{ м}, G = 12 \text{ кН}, F = 6 \text{ кН}.$$

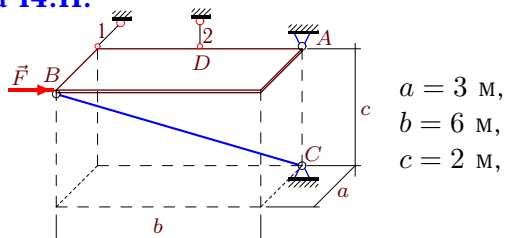
Задача 14.10.



$$\begin{aligned} a &= 4 \text{ м}, \\ b &= 8 \text{ м}, \\ c &= 1 \text{ м}, \end{aligned}$$

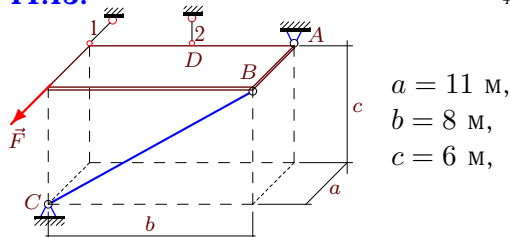
$$AD = 4 \text{ м}, G = 6 \text{ кН}, F = 16 \text{ кН}.$$

Задача 14.11.



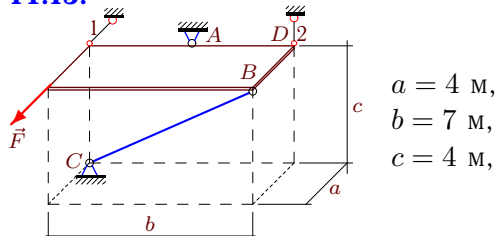
$AD = 3 \text{ м}, G=4 \text{ кН}, F=4 \text{ кН}.$

Задача 14.13.



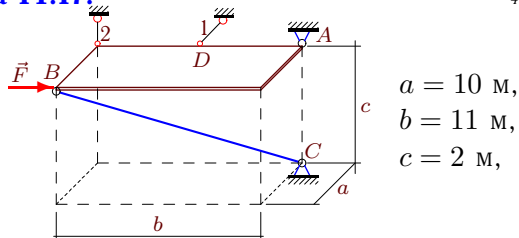
$AD = 4 \text{ м}, G=36 \text{ кН}, F=4 \text{ кН}.$

Задача 14.15.



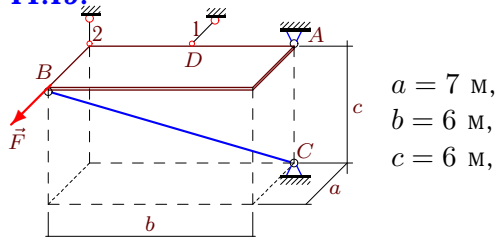
$AD = 3 \text{ м}, G=72 \text{ кН}, F=4 \text{ кН}.$

Задача 14.17.



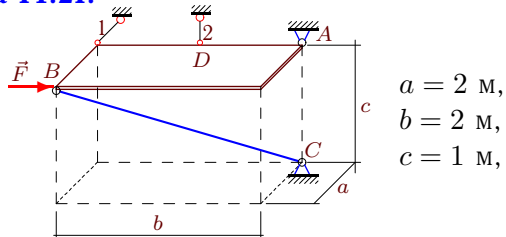
$AD = 5 \text{ м}, G=8 \text{ кН}, F=5 \text{ кН}.$

Задача 14.19.



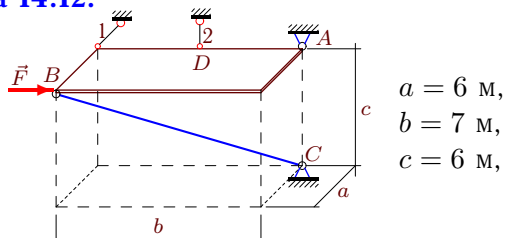
$AD = 3 \text{ м}, G=24 \text{ кН}, F=3 \text{ кН}.$

Задача 14.21.



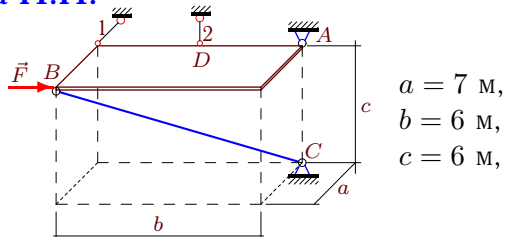
$AD = 1 \text{ м}, G=2 \text{ кН}, F=1 \text{ кН}.$

Задача 14.12.



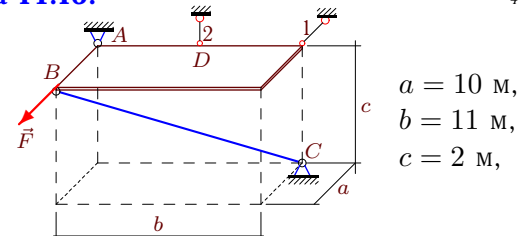
$AD = 3 \text{ м}, G=24 \text{ кН}, F=7 \text{ кН}.$

Задача 14.14.



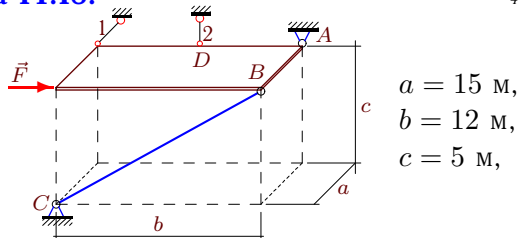
$AD = 3 \text{ м}, G=36 \text{ кН}, F=6 \text{ кН}.$

Задача 14.16.



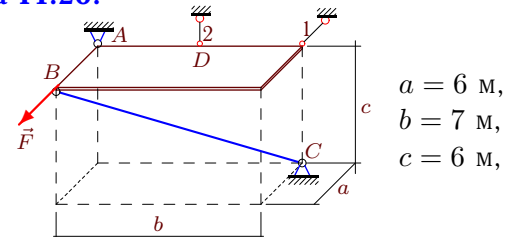
$AD = 5 \text{ м}, G=80 \text{ кН}, F=11 \text{ кН}.$

Задача 14.18.



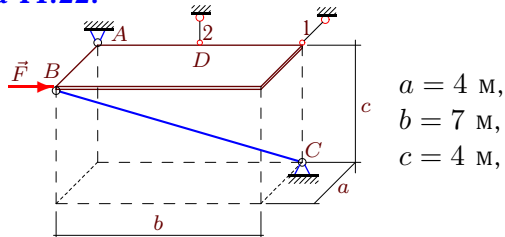
$AD = 6 \text{ м}, G=60 \text{ кН}, F=4 \text{ кН}.$

Задача 14.20.



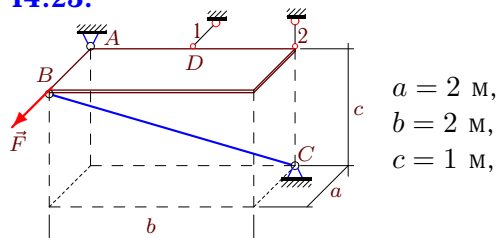
$AD = 3 \text{ м}, G=72 \text{ кН}, F=7 \text{ кН}.$

Задача 14.22.



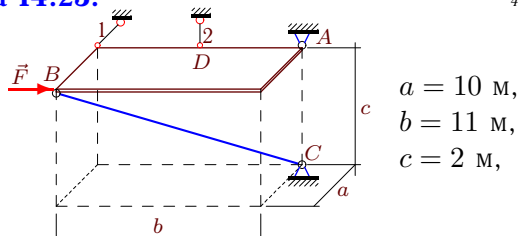
$AD = 3 \text{ м}, G=72 \text{ кН}, F=14 \text{ кН}.$

Задача 14.23.



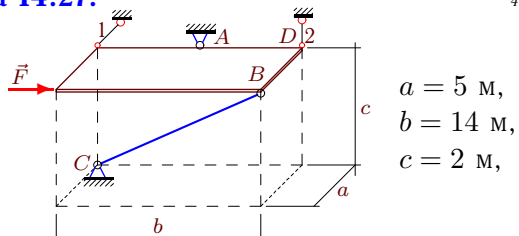
$AD = 1 \text{ м}, G=2 \text{ кН}, F=1 \text{ кН}.$

Задача 14.25.



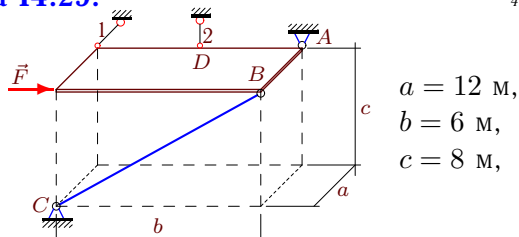
$AD = 5 \text{ м}, G=12 \text{ кН}, F=11 \text{ кН}.$

Задача 14.27.



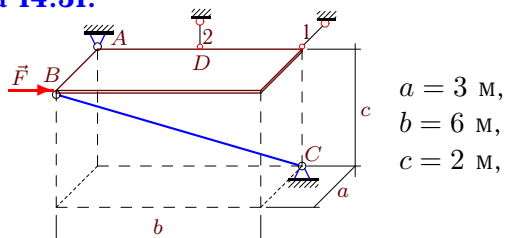
$AD = 7 \text{ м}, G=84 \text{ кН}, F=7 \text{ кН}.$

Задача 14.29.



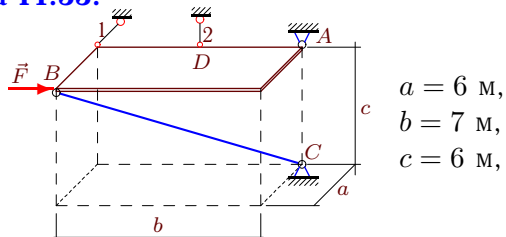
$AD = 3 \text{ м}, G=16 \text{ кН}, F=1 \text{ кН}.$

Задача 14.31.



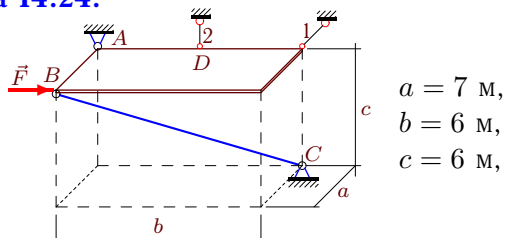
$AD = 3 \text{ м}, G=4 \text{ кН}, F=4 \text{ кН}.$

Задача 14.33.



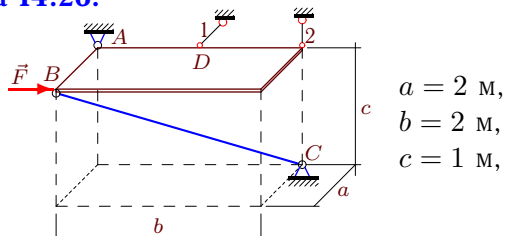
$AD = 3 \text{ м}, G=48 \text{ кН}, F=7 \text{ кН}.$

Задача 14.24.



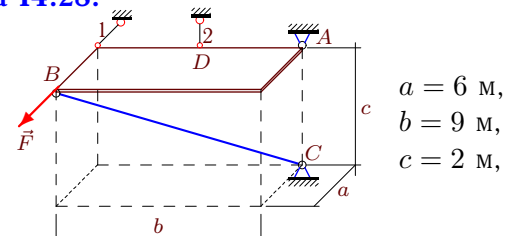
$AD = 3 \text{ м}, G=144 \text{ кН}, F=6 \text{ кН}.$

Задача 14.26.



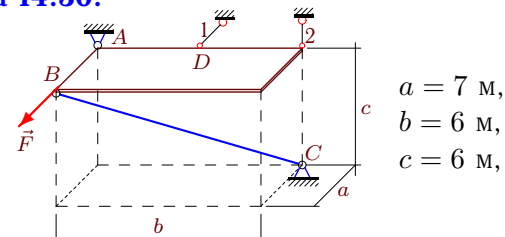
$AD = 1 \text{ м}, G=4 \text{ кН}, F=1 \text{ кН}.$

Задача 14.28.



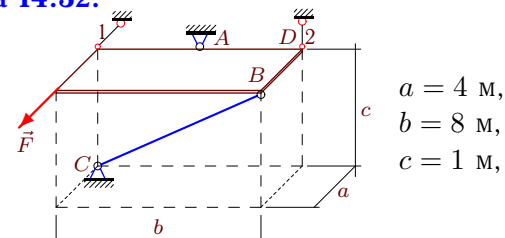
$AD = 4 \text{ м}, G=16 \text{ кН}, F=9 \text{ кН}.$

Задача 14.30.



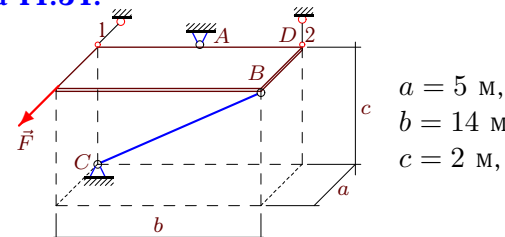
$AD = 3 \text{ м}, G=36 \text{ кН}, F=1 \text{ кН}.$

Задача 14.32.



$AD = 4 \text{ м}, G=2 \text{ кН}, F=1 \text{ кН}.$

Задача 14.34.



$AD = 7 \text{ м}, G=12 \text{ кН}, F=1 \text{ кН}.$

Равновесие полки

	H	V	X_A	Y_A	Z_A	S
1	-60	14	25	84	0	-105
2	-51	8	27	34	0	-44
3	-28	0	-5	14	2	-15
4	-29	14	28	-24	-7	-25
5	-5	-2	0	-4	4	-6
6	-2	0	-1	2	1	-3
7	-162	120	147	-105	-64	-119
8	-7	6	5	-4	-3	-5
9	-12	0	-1	6	6	-11
10	8	0	-20	8	3	-27
11	2	0	-5	2	2	-7
12	6	0	-18	7	12	-22
13	-37	36	33	-24	-18	-30
14	7	0	-28	12	18	-33
15	-40	-48	0	-63	84	-81
16	-200	88	-11	220	-48	-300
17	10	0	-30	17	4	-30
18	-95	60	95	-76	-30	-78
19	-6	0	-11	12	12	-22
20	-36	84	-7	42	-48	-66
21	1	0	-3	1	1	-3
22	-28	84	-8	49	-48	-81
23	-4	1	1	2	0	-3
24	-77	144	-7	66	-72	-132
25	10	0	-40	22	6	-45
26	-6	2	2	3	0	-6
27	-110	-42	5	-301	84	-315
28	-9	0	-24	36	8	-44
29	-14	16	14	-7	-8	-10
30	-42	18	20	18	0	-33
31	-1	4	-2	2	-2	-7
32	-5	-1	0	-8	2	-9
33	6	0	-30	21	24	-44
34	-16	-6	0	-42	12	-45