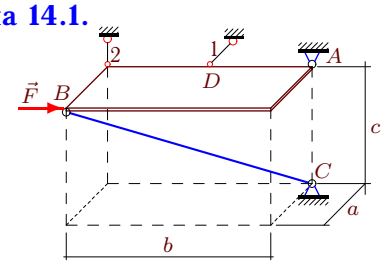
Равновесие полки

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

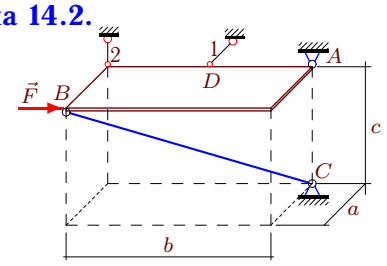
Задача 14.1.



$a = 10$ м, $b = 11$ м, $c = 2$ м,

$AD = 5$ м, G=12 кН, F=10 кН.

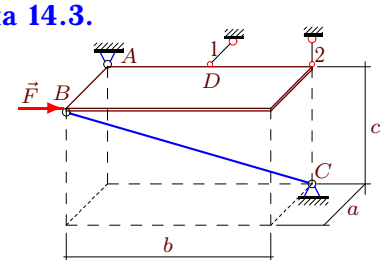
Задача 14.2.



$a = 4$ м, $b = 7$ м, $c = 4$ м,

$AD = 3$ м, G=24 кН, F=3 кН.

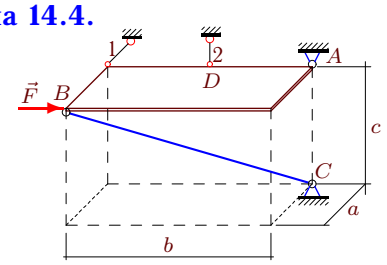
Задача 14.3.



$a = 4$ м, $b = 8$ м, $c = 1$ м,

$AD = 4$ м, G=8 кН, F=1 кН.

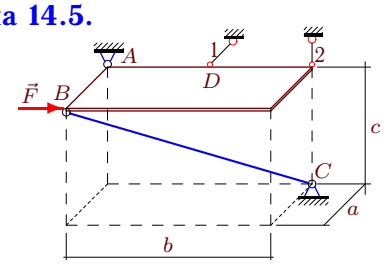
Задача 14.4.



$a = 2$ м, $b = 2$ м, $c = 1$ м,

$AD = 1$ м, G=6 кН, F=2 кН.

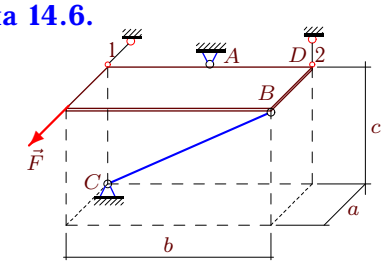
Задача 14.5.



$a = 3$ м, $b = 6$ м, $c = 2$ м,

$AD = 3$ м, G=8 кН, F=1 кН.

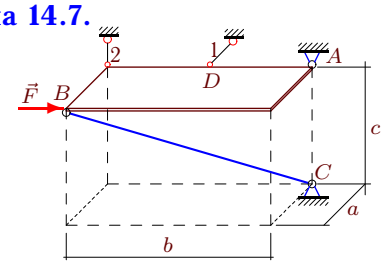
Задача 14.6.



$a = 10$ м, $b = 11$ м, $c = 2$ м,

$AD = 5$ м, G=20 кН, F=12 кН.

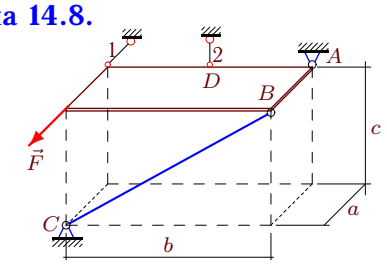
Задача 14.7.



$a = 2$ м, $b = 2$ м, $c = 1$ м,

$AD = 1$ м, G=8 кН, F=1 кН.

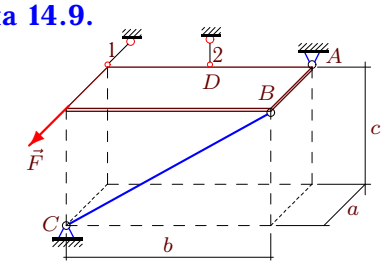
Задача 14.8.



$a = 28$ м, $b = 24$ м, $c = 7$ м,

$AD = 12$ м, G=14 кН, F=1 кН.

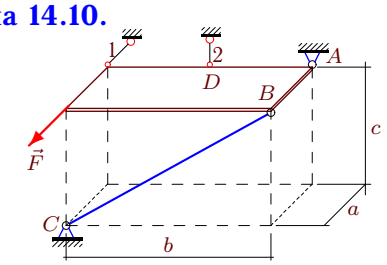
Задача 14.9.



$a = 12$ м, $b = 6$ м, $c = 8$ м,

$AD = 3$ м, G=32 кН, F=1 кН.

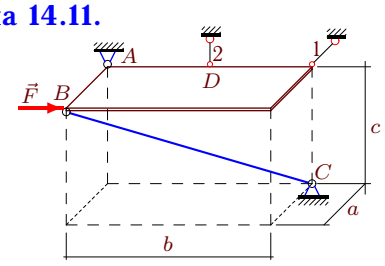
Задача 14.10.



$a = 20$ м, $b = 15$ м, $c = 8$ м,

$AD = 7$ м, G=448 кН, F=15 кН.

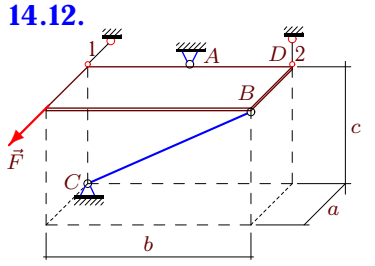
Задача 14.11. 3



$a = 5$ м,
$b = 14$ м,
$c = 2$ м,

$AD = 7$ м, G=28 кН, F=28 кН.

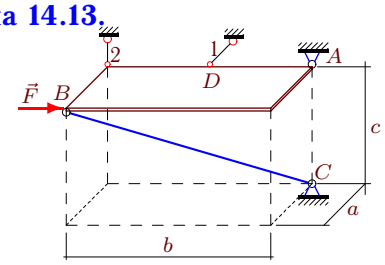
Задача 14.12. 3



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=2 кН, F=2 кН.

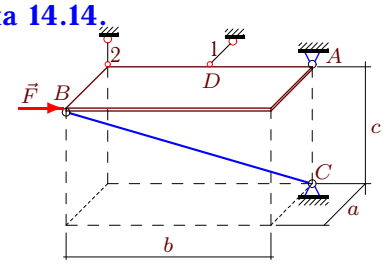
Задача 14.13. 3



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=6 кН, F=1 кН.

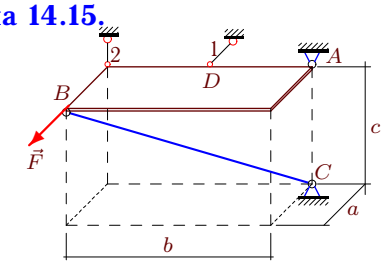
Задача 14.14. 3



$a = 6$ м,
$b = 7$ м,
$c = 6$ м,

$AD = 3$ м, G=12 кН, F=6 кН.

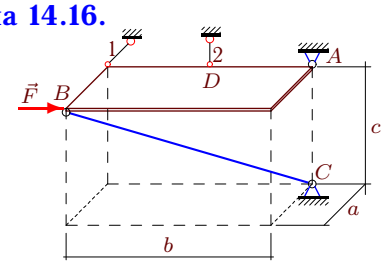
Задача 14.15. 3



$a = 6$ м,
$b = 9$ м,
$c = 2$ м,

$AD = 4$ м, G=8 кН, F=4 кН.

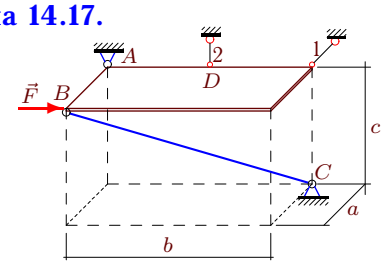
Задача 14.16. 3



$a = 4$ м,
$b = 8$ м,
$c = 1$ м,

$AD = 4$ м, G=2 кН, F=4 кН.

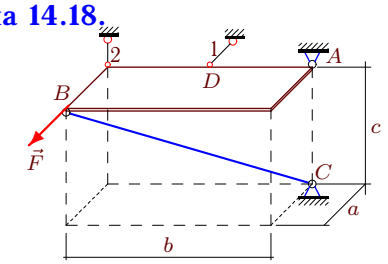
Задача 14.17. 3



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=6 кН, F=2 кН.

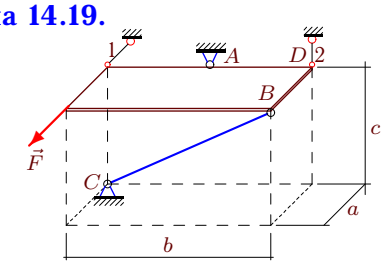
Задача 14.18. 3



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=4 кН, F=1 кН.

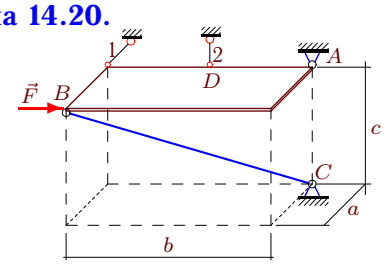
Задача 14.19. 3



$a = 5$ м,
$b = 14$ м,
$c = 2$ м,

$AD = 7$ м, G=4 кН, F=2 кН.

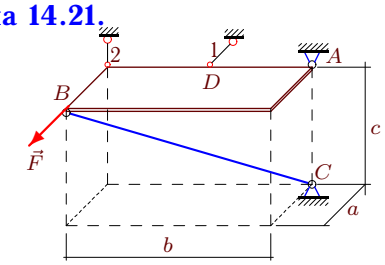
Задача 14.20. 3



$a = 10$ м,
$b = 11$ м,
$c = 2$ м,

$AD = 5$ м, G=12 кН, F=22 кН.

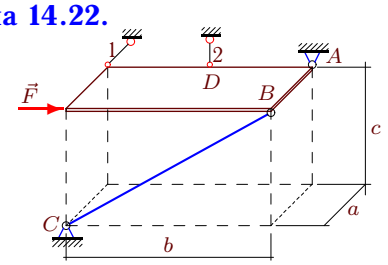
Задача 14.21. 3



$a = 4$ м,
$b = 8$ м,
$c = 1$ м,

$AD = 4$ м, G=6 кН, F=4 кН.

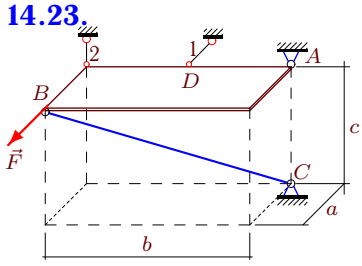
Задача 14.22. 3



$a = 12$ м,
$b = 6$ м,
$c = 8$ м,

$AD = 3$ м, G=16 кН, F=1 кН.

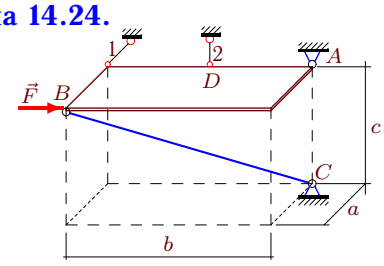
Задача 14.23. 3



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=4 кН, F=1 кН.

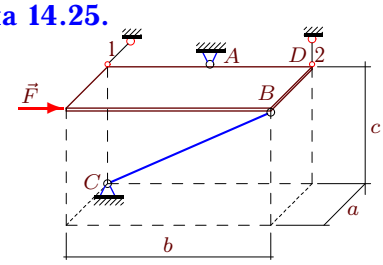
Задача 14.24. 3



$a = 4$ м,
$b = 7$ м,
$c = 4$ м,

$AD = 3$ м, G=32 кН, F=7 кН.

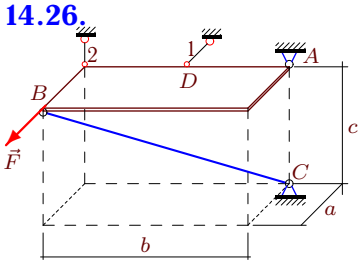
Задача 14.25. 3



$a = 10$ м,
$b = 11$ м,
$c = 2$ м,

$AD = 5$ м, G=20 кН, F=12 кН.

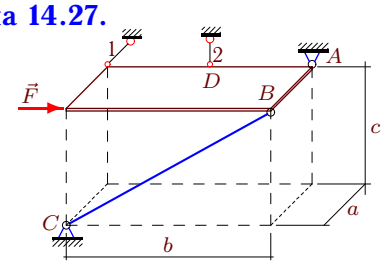
Задача 14.26. 3



$a = 6$ м,
$b = 9$ м,
$c = 2$ м,

$AD = 4$ м, G=12 кН, F=8 кН.

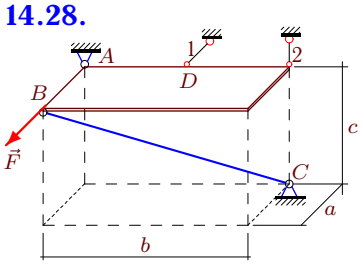
Задача 14.27. 3



$a = 17$ м,
$b = 12$ м,
$c = 9$ м,

$AD = 6$ м, G=54 кН, F=12 кН.

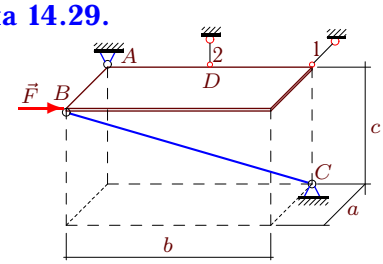
Задача 14.28. 3



$a = 7$ м,
$b = 6$ м,
$c = 6$ м,

$AD = 3$ м, G=36 кН, F=1 кН.

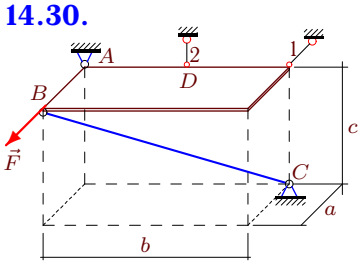
Задача 14.29. 3



$a = 10$ м,
$b = 11$ м,
$c = 2$ м,

$AD = 5$ м, G=60 кН, F=11 кН.

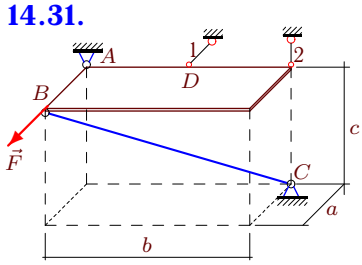
Задача 14.30. 3



$a = 3$ м,
$b = 6$ м,
$c = 2$ м,

$AD = 3$ м, G=4 кН, F=2 кН.

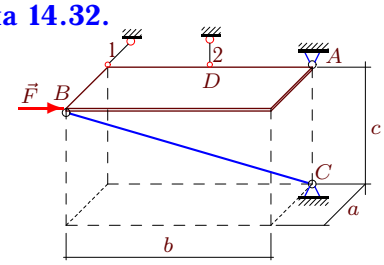
Задача 14.31. 3



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=6 кН, F=1 кН.

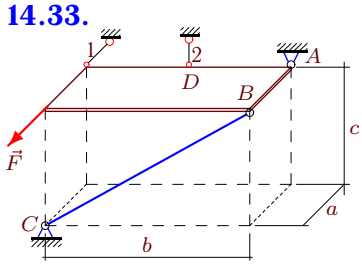
Задача 14.32. 3



$a = 7$ м,
$b = 6$ м,
$c = 6$ м,

$AD = 3$ м, G=12 кН, F=12 кН.

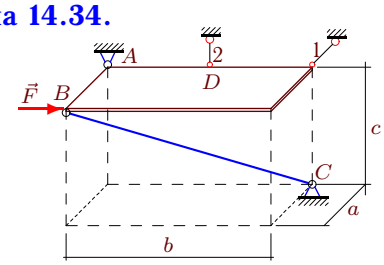
Задача 14.33. 3



$a = 14$ м,
$b = 12$ м,
$c = 5$ м,

$AD = 6$ м, G=10 кН, F=1 кН.

Задача 14.34. 3



$a = 6$ м,
$b = 7$ м,
$c = 6$ м,

$AD = 3$ м, G=72 кН, F=7 кН.

14.3

Равновесие полки

	H	V	X_A	Y_A	Z_A	S
1	20	0	-50	23	6	-45
2	4	0	-16	18	12	-27
3	-31	4	15	31	0	-36
4	2	0	-8	4	3	-9
5	-11	4	5	11	0	-14
6	-62	-12	0	-55	22	-75
7	2	0	-10	7	4	-12
8	-29	14	28	-24	-7	-25
9	-25	32	24	-12	-16	-20
10	-575	480	560	-420	-256	-476
11	-25	28	-10	70	-14	-105
12	-4	-1	0	-2	2	-3
13	2	0	-8	5	3	-9
14	12	0	-18	1	6	-11
15	-9	0	-7	18	4	-22
16	2	0	-6	4	1	-9
17	-4	6	-2	4	-3	-9
18	-2	0	-3	4	2	-6
19	-7	-2	0	-14	4	-15
20	20	0	-50	11	6	-45
21	-8	0	-8	24	3	-27
22	-14	16	14	-7	-8	-10
23	-2	0	-3	4	2	-6
24	4	0	-20	21	16	-36
25	-70	-12	20	-67	22	-75
26	-18	0	-8	27	6	-33
27	-68	54	68	-48	-27	-45
28	-42	18	20	18	0	-33
29	-140	66	-10	154	-36	-225
30	-3	4	-2	6	-2	-7
31	-12	3	5	6	0	-9
32	14	0	-21	-6	6	-11
33	-15	10	14	-12	-5	-13
34	-30	84	-6	35	-48	-66