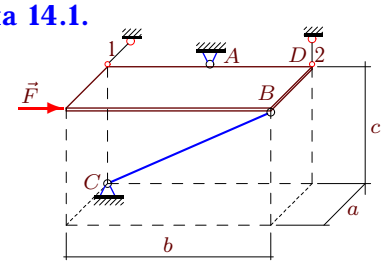
Равновесие полки

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.)

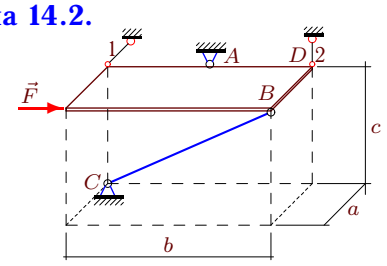
Задача 14.1. 5



$a = 2$ м, $b = 2$ м, $c = 1$ м,

$AD = 1$ м, G=6 кН, F=2 кН.

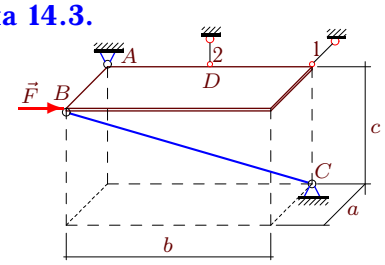
Задача 14.2. 5



$a = 4$ м, $b = 8$ м, $c = 1$ м,

$AD = 4$ м, G=6 кН, F=2 кН.

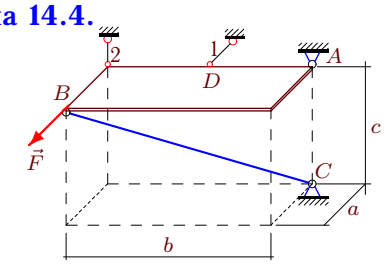
Задача 14.3. 5



$a = 3$ м, $b = 6$ м, $c = 2$ м,

$AD = 3$ м, G=16 кН, F=2 кН.

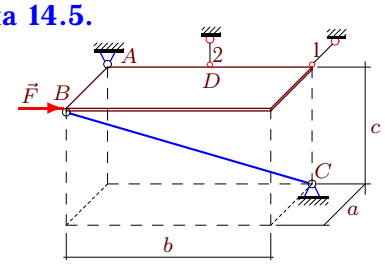
Задача 14.4. 5



$a = 2$ м, $b = 2$ м, $c = 1$ м,

$AD = 1$ м, G=4 кН, F=1 кН.

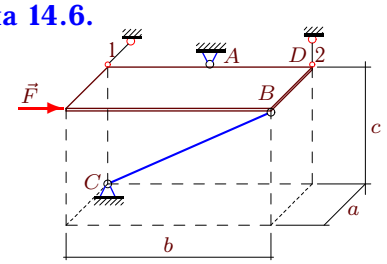
Задача 14.5. 5



$a = 4$ м, $b = 7$ м, $c = 4$ м,

$AD = 3$ м, G=72 кН, F=7 кН.

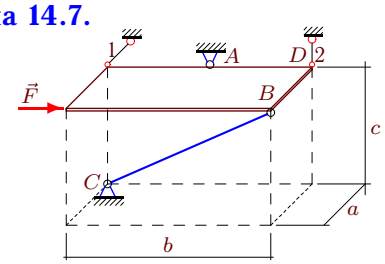
Задача 14.6. 5



$a = 10$ м, $b = 11$ м, $c = 2$ м,

$AD = 5$ м, G=20 кН, F=12 кН.

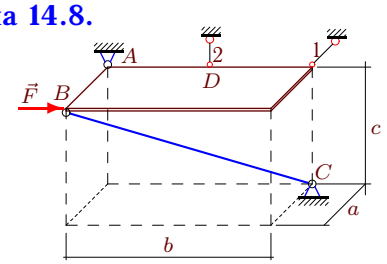
Задача 14.7. 5



$a = 6$ м, $b = 7$ м, $c = 6$ м,

$AD = 3$ м, G=36 кН, F=2 кН.

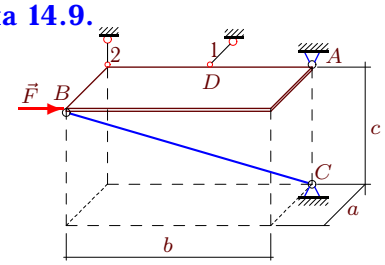
Задача 14.8. 5



$a = 10$ м, $b = 11$ м, $c = 2$ м,

$AD = 5$ м, G=40 кН, F=11 кН.

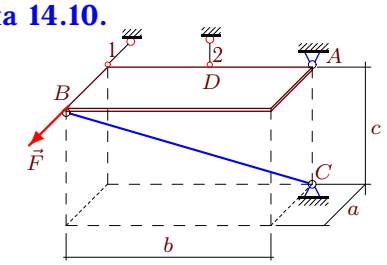
Задача 14.9. 5



$a = 7$ м, $b = 6$ м, $c = 6$ м,

$AD = 3$ м, G=36 кН, F=6 кН.

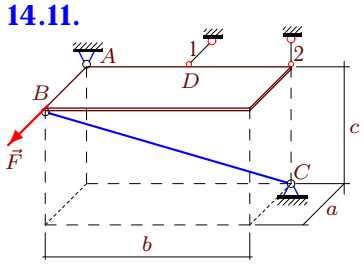
Задача 14.10. 5



$a = 10$ м, $b = 11$ м, $c = 2$ м,

$AD = 5$ м, G=4 кН, F=11 кН.

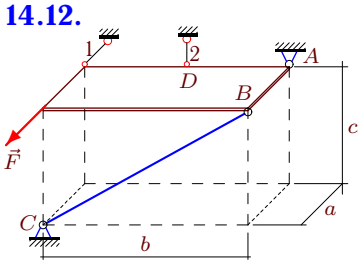
Задача 14.11. 5



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=6 кН, F=1 кН.

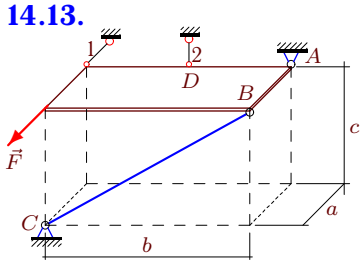
Задача 14.12. 5



$a = 12$ м,
$b = 6$ м,
$c = 8$ м,

$AD = 3$ м, G=32 кН, F=1 кН.

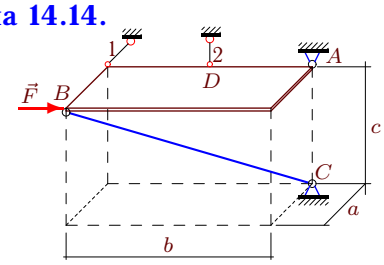
Задача 14.13. 5



$a = 17$ м,
$b = 12$ м,
$c = 9$ м,

$AD = 6$ м, G=18 кН, F=2 кН.

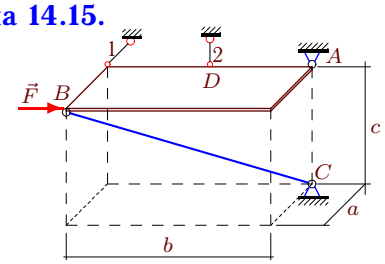
Задача 14.14. 5



$a = 6$ м,
$b = 9$ м,
$c = 2$ м,

$AD = 4$ м, G=4 кН, F=9 кН.

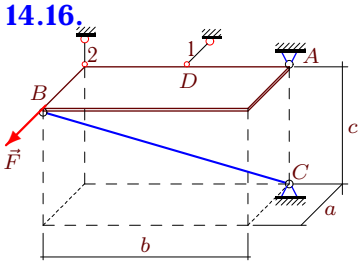
Задача 14.15. 5



$a = 7$ м,
$b = 6$ м,
$c = 6$ м,

$AD = 3$ м, G=24 кН, F=6 кН.

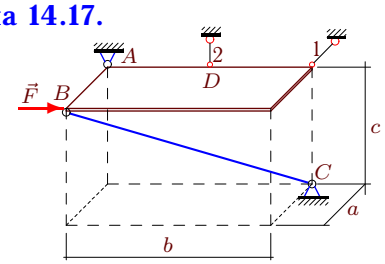
Задача 14.16. 5



$a = 4$ м,
$b = 8$ м,
$c = 1$ м,

$AD = 4$ м, G=2 кН, F=2 кН.

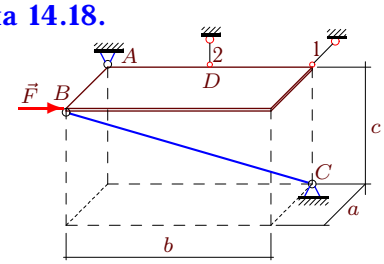
Задача 14.17. 5



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=2 кН, F=2 кН.

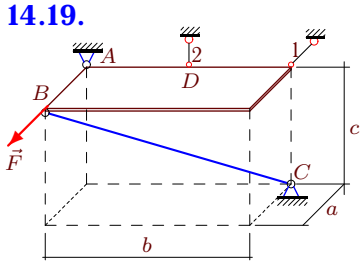
Задача 14.18. 5



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=2 кН, F=2 кН.

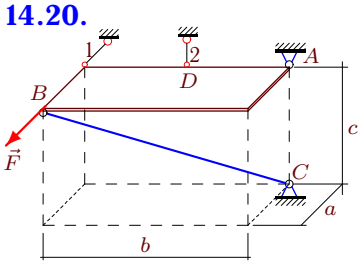
Задача 14.19. 5



$a = 7$ м,
$b = 6$ м,
$c = 6$ м,

$AD = 3$ м, G=36 кН, F=2 кН.

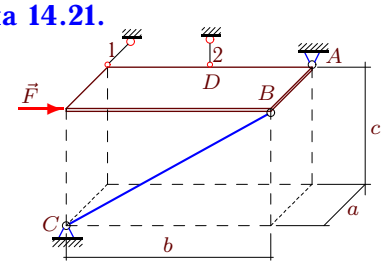
Задача 14.20. 5



$a = 6$ м,
$b = 7$ м,
$c = 6$ м,

$AD = 3$ м, G=36 кН, F=14 кН.

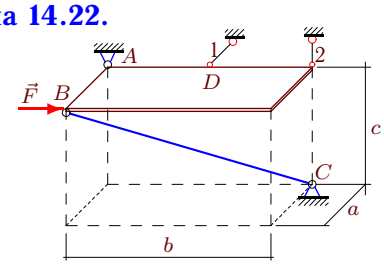
Задача 14.21. 5



$a = 15$ м,
$b = 12$ м,
$c = 5$ м,

$AD = 6$ м, G=60 кН, F=4 кН.

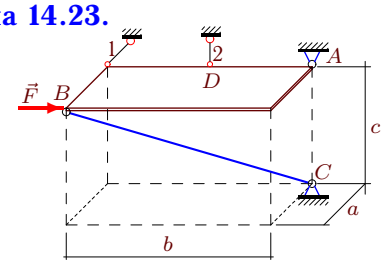
Задача 14.22. 5



$a = 4$ м,
$b = 8$ м,
$c = 1$ м,

$AD = 4$ м, G=6 кН, F=1 кН.

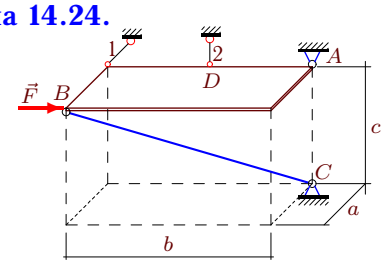
Задача 14.23.



$a = 5$ м,
$b = 14$ м,
$c = 2$ м,

$AD = 7$ м, G=12 кН, F=28 кН.

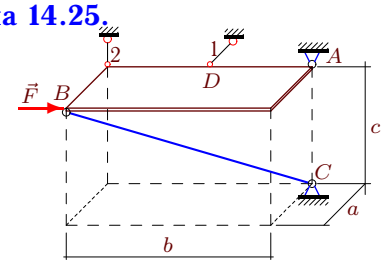
Задача 14.24.



$a = 7$ м,
$b = 6$ м,
$c = 6$ м,

$AD = 3$ м, G=36 кН, F=6 кН.

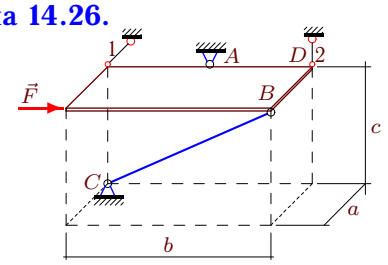
Задача 14.25.



$a = 4$ м,
$b = 8$ м,
$c = 1$ м,

$AD = 4$ м, G=2 кН, F=4 кН.

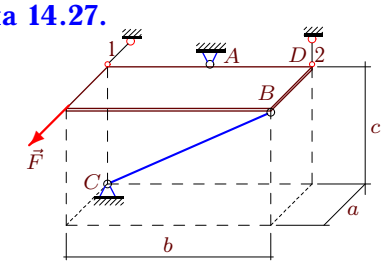
Задача 14.26.



$a = 10$ м,
$b = 11$ м,
$c = 2$ м,

$AD = 5$ м, G=20 кН, F=12 кН.

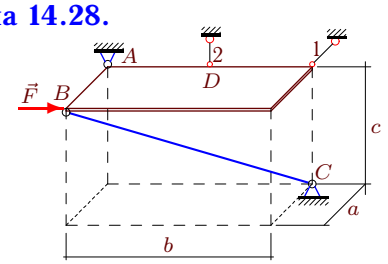
Задача 14.27.



$a = 7$ м,
$b = 6$ м,
$c = 6$ м,

$AD = 3$ м, G=12 кН, F=1 кН.

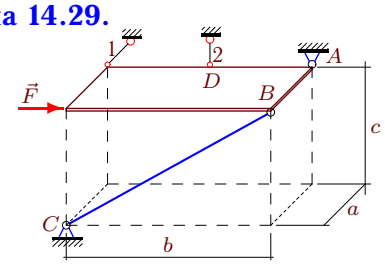
Задача 14.28.



$a = 6$ м,
$b = 7$ м,
$c = 6$ м,

$AD = 3$ м, G=108 кН, F=14 кН.

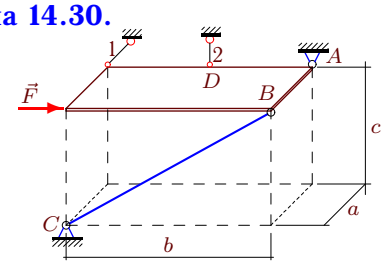
Задача 14.29.



$a = 20$ м,
$b = 15$ м,
$c = 8$ м,

$AD = 7$ м, G=224 кН, F=15 кН.

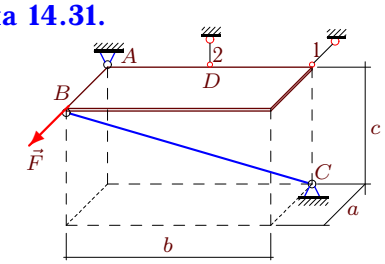
Задача 14.30.



$a = 20$ м,
$b = 15$ м,
$c = 8$ м,

$AD = 7$ м, G=112 кН, F=30 кН.

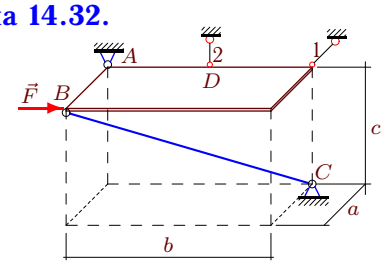
Задача 14.31.



$a = 2$ м,
$b = 2$ м,
$c = 1$ м,

$AD = 1$ м, G=2 кН, F=2 кН.

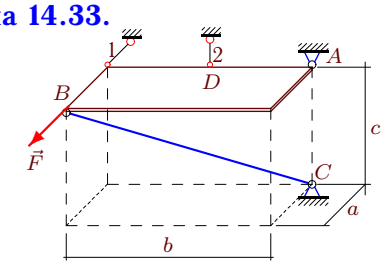
Задача 14.32.



$a = 3$ м,
$b = 6$ м,
$c = 2$ м,

$AD = 3$ м, G=16 кН, F=2 кН.

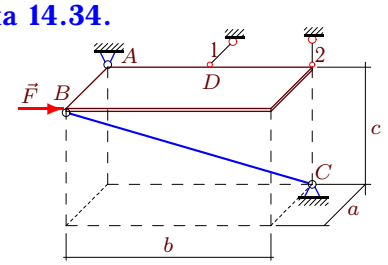
Задача 14.33.



$a = 10$ м,
$b = 11$ м,
$c = 2$ м,

$AD = 5$ м, G=4 кН, F=11 кН.

Задача 14.34.



$a = 4$ м,
$b = 7$ м,
$c = 4$ м,

$AD = 3$ м, G=48 кН, F=3 кН.

14.5

Равновесие полки

	H	V	X_A	Y_A	Z_A	S
1	-10	-3	4	-8	6	-9
2	-14	-3	2	-26	6	-27
3	-11	16	-1	22	-8	-28
4	-2	0	-3	4	2	-6
5	-32	84	-4	56	-48	-81
6	-70	-12	20	-67	22	-75
7	-21	-24	3	-23	42	-33
8	-90	44	-10	99	-24	-150
9	14	0	-35	12	18	-33
10	-11	0	-10	11	2	-15
11	-12	3	5	6	0	-9
12	-25	32	24	-12	-16	-20
13	-19	18	17	-12	-9	-15
14	6	0	-12	0	2	-11
15	7	0	-21	6	12	-22
16	-4	0	-2	8	1	-9
17	0	2	-2	0	-1	-3
18	0	2	-2	0	-1	-3
19	-21	36	-2	18	-18	-33
20	-14	0	-18	21	18	-33
21	-95	60	95	-76	-30	-78
22	-23	3	11	23	0	-27
23	10	0	-25	14	6	-45
24	7	0	-28	12	18	-33
25	4	0	-8	4	1	-9
26	-70	-12	20	-67	22	-75
27	-8	-6	0	-6	12	-11
28	-42	126	-12	49	-72	-99
29	-300	240	300	-225	-128	-238
30	-180	120	180	-135	-64	-119
31	-2	2	-2	2	-1	-3
32	-11	16	-1	22	-8	-28
33	-11	0	-10	11	2	-15
34	-52	24	28	39	0	-54