

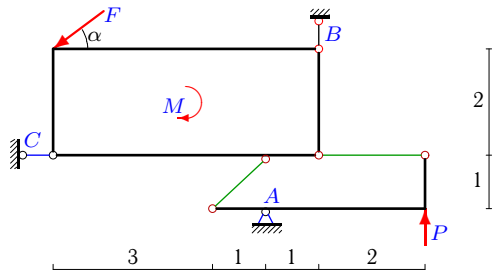
Конструкция из пластины и уголка

Конструкция состоит из прямоугольной пластины и жесткого уголка, изогнутого под прямым углом. Тела соединены двумя невесомыми стержнями. Определить реакции опор конструкции (в кН). Размеры даны в метрах.

Кирсанов М.Н. Задачи по теоретической механике с решениями в **Maple 11.** – М.: ФИЗМАТЛИТ, 2010. – 264 с. (с.15)

Задача S31.1.

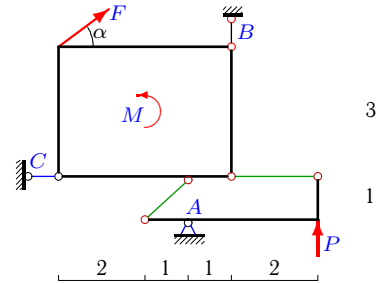
5



$$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.2.

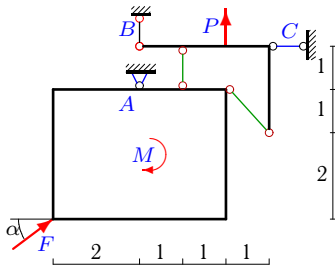
5



$$F = 35 \text{ кН}, P = 2 \text{ кН}, M = 63 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.3.

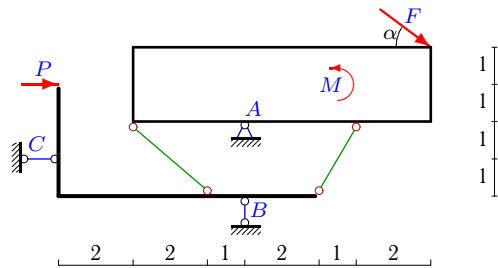
5



$$F = 20 \text{ кН}, P = 1 \text{ кН}, M = 24 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.4.

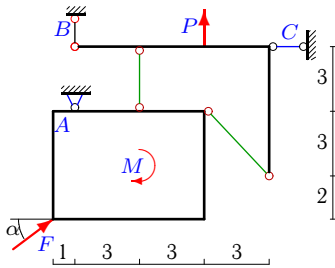
5



$$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 24 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.5.

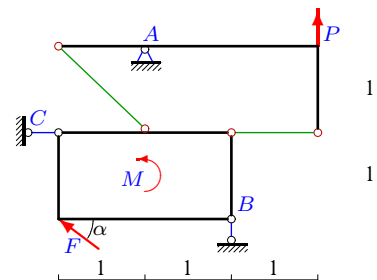
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$$F = 5 \text{ кН}, P = 3 \text{ кН}, M = 17 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.6.

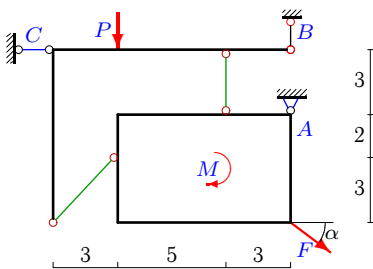
5



$$F = 5 \text{ кН}, P = 6 \text{ кН}, M = 3 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.7.

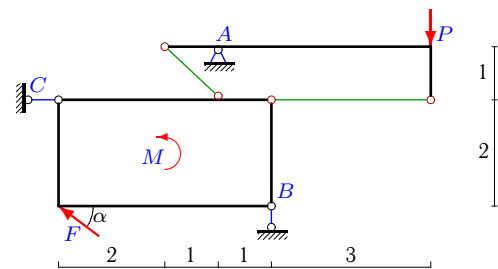
5



$$F = 5 \text{ кН}, P = 3 \text{ кН}, M = 20 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.8.

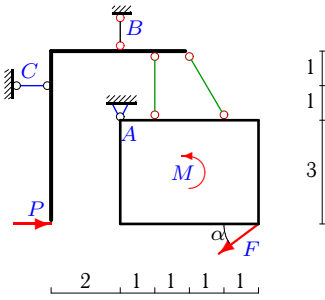
5



$$F = 10 \text{ кН}, P = 1 \text{ кН}, M = 18 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.9.

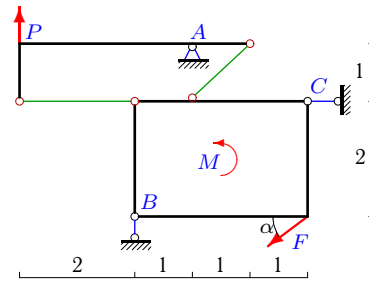
5



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 118 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.10.

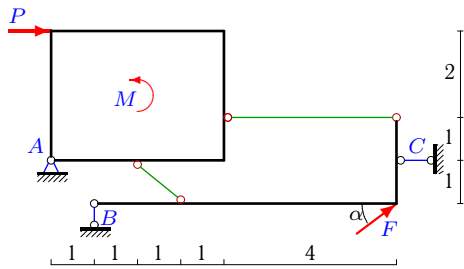
5



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 30 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.11.

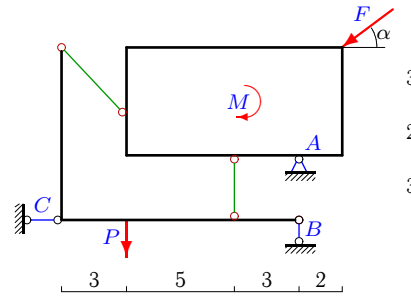
5



$F = 15 \text{ кН}, P = 5 \text{ кН}, M = 15 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.12.

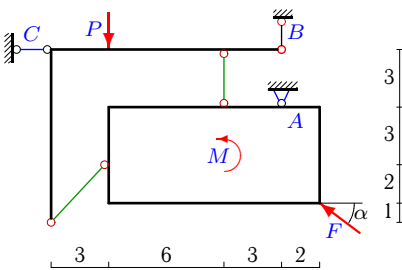
5



$F = 5 \text{ кН}, P = 6 \text{ кН}, M = 14 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.13.

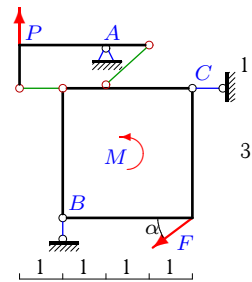
5



$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 28 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.14.

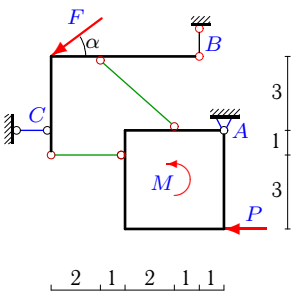
5



$F = 35 \text{ кН}, P = 1 \text{ кН}, M = 42 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.15.

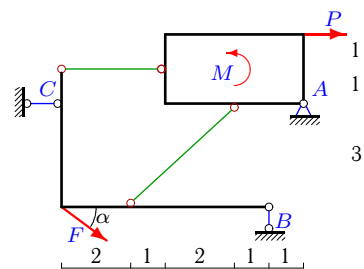
5



$F = 25 \text{ кН}, P = 2 \text{ кН}, M = 8 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.16.

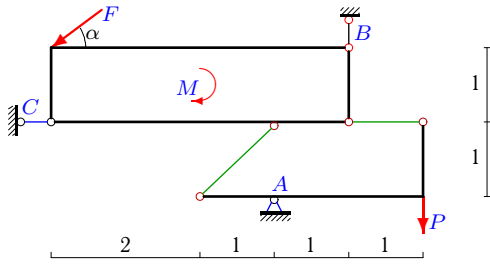
5



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 2 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.17.

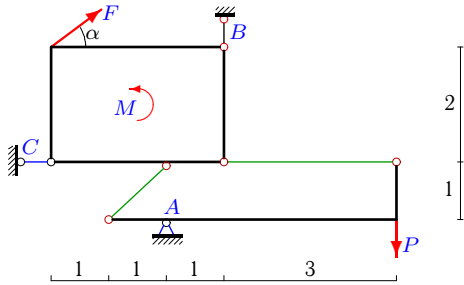
5



$F = 5 \text{ кН}, P = 6 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.19.

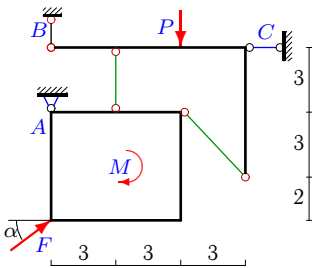
5



$F = 20 \text{ кН}, P = 3 \text{ кН}, M = 24 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.21.

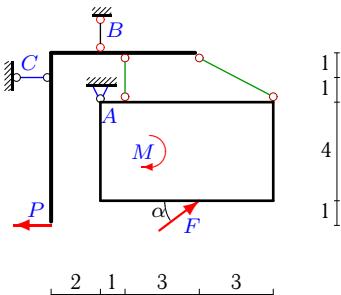
5



$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 40 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.23.

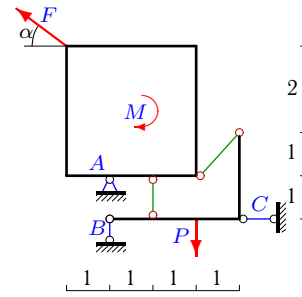
5



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 31 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.18.

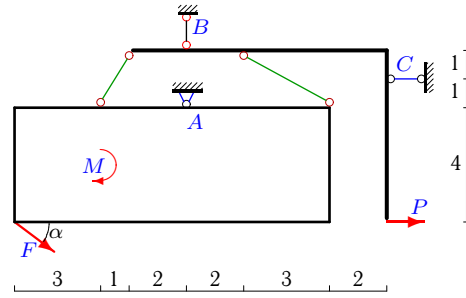
5



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.20.

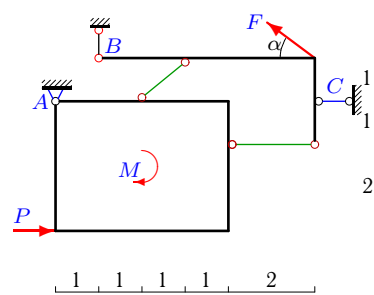
5



$F = 5 \text{ кН}, P = 5 \text{ кН}, M = 31 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.22.

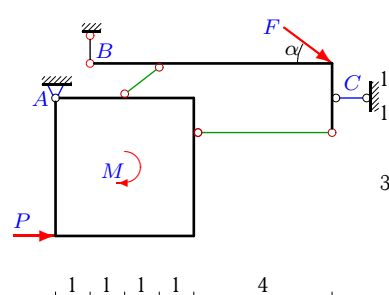
5



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 3 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.24.

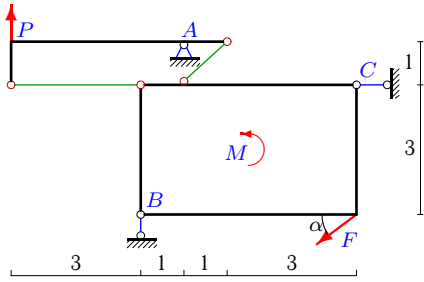
5



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.25.

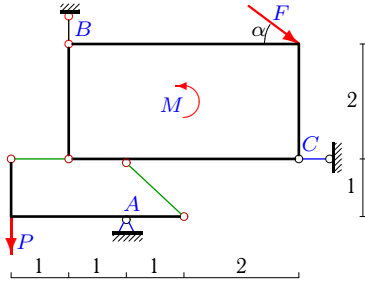
5



$F = 35 \text{ кН}, P = 6 \text{ кН}, M = 84 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.27.

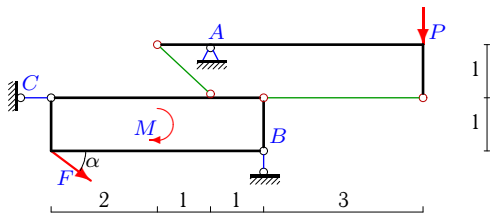
5



$F = 5 \text{ кН}, P = 3 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.29.

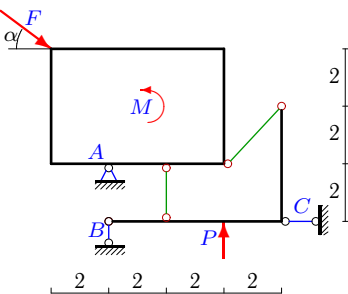
5



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.31.

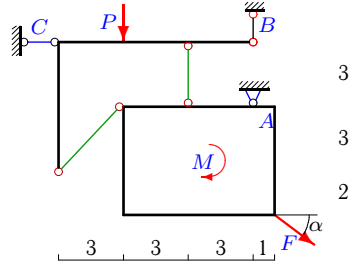
5



$F = 15 \text{ кН}, P = 8 \text{ кН}, M = 30 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.26.

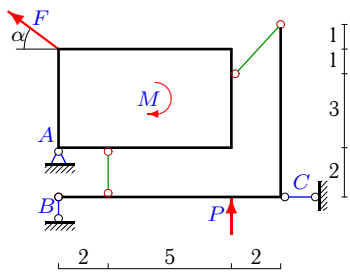
5



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 85 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.28.

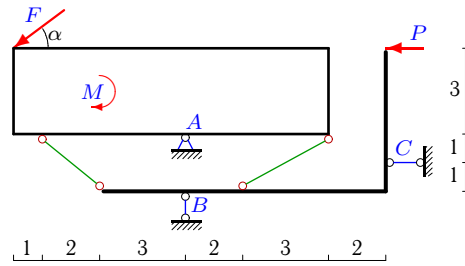
5



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 16 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.30.

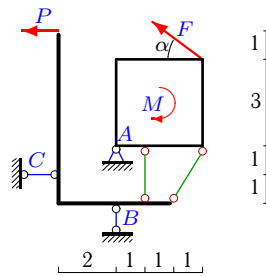
5



$F = 20 \text{ кН}, P = 1 \text{ кН}, M = 122 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.32.

5



$F = 5 \text{ кН}, P = 3 \text{ кН}, M = 19 \text{ кНм}, \cos \alpha = 0.8.$

S31 Ответы.
Конструкция из пластины и уголка

03.12.2011

№	X_A	Y_A	R_B	R_C
1	-3	10	-8	-7
2	-6	-107	84	22
3	-18	-14	1	2
4	-5	8	5	0
5	-10	-9	3	6
6	12	-13	-4	8
7	-12	11	-5	-8
8	4	21	16	12
9	10	-27	42	-7
10	-9	52	40	29
11	70	75	84	-87
12	20	19	10	16
13	-1	3	-6	-9
14	-2	104	84	30
15	-148	-150	165	-170
16	29	-30	-33	34
17	12	13	-4	8
18	2	-1	1	2
19	12	-41	32	28
20	-32	112	-109	23
21	2	0	3	6
22	-20	19	-22	23
23	5	30	-33	8
24	24	-25	28	-29
25	-24	99	84	52
26	-26	21	-3	-6
27	-6	14	-8	2
28	11	-10	-5	-7
29	-8	9	4	-4
30	18	22	10	-1
31	4	-7	-8	-16
32	21	-69	-66	14

S31 файл o31s5A