

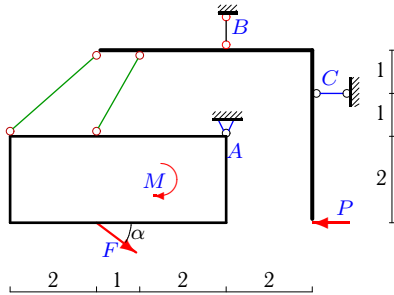
Конструкция из пластины и уголка

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.

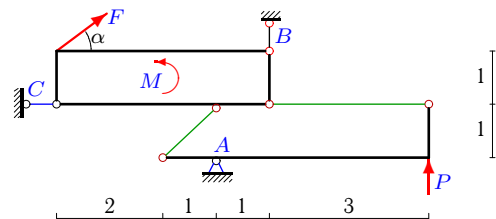
7



$$F = 25 \text{ кН}, P = 2 \text{ кН}, M = 84 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.2.

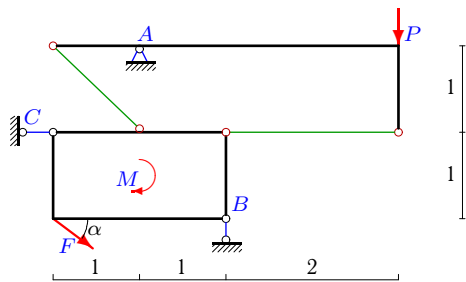
7



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

Задача S31.3.

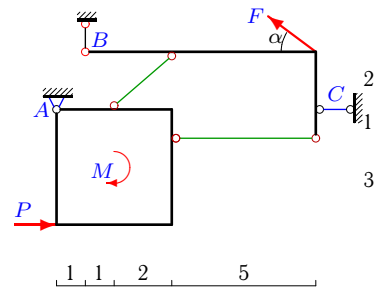
7



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

Задача S31.4.

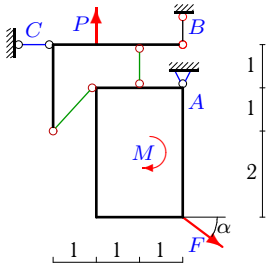
7



$$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 8 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.5.

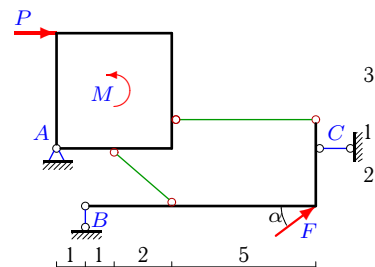
7



$$F = 20 \text{ кН}, P = 3 \text{ кН}, M = 48 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.6.

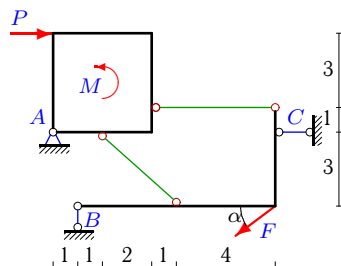
7



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

Задача S31.7.

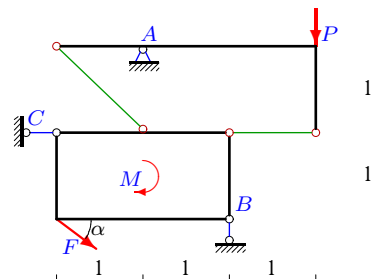
7



$$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 8 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.8.

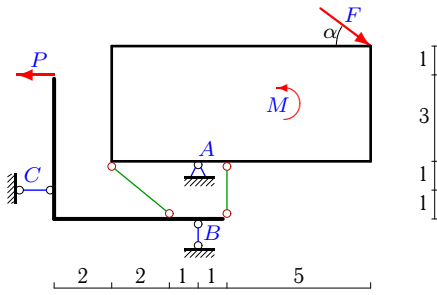
7



$$F = 35 \text{ кН}, P = 1 \text{ кН}, M = 21 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.9.

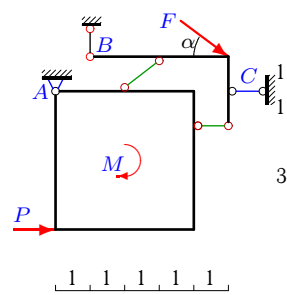
7



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 37 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.10.

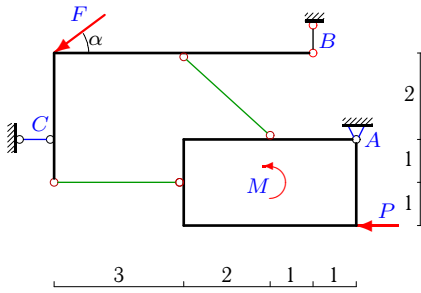
7



$F = 25 \text{ кН}, P = 4 \text{ кН}, M = 16 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.11.

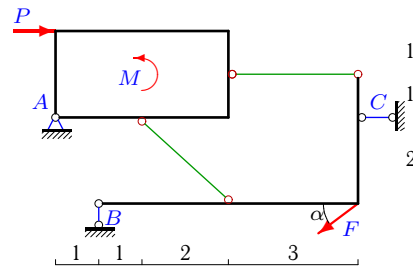
7



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.12.

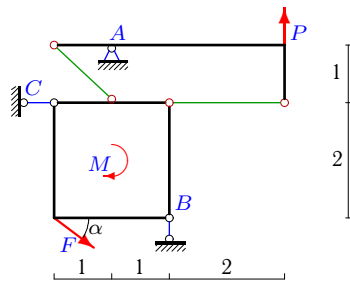
7



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.13.

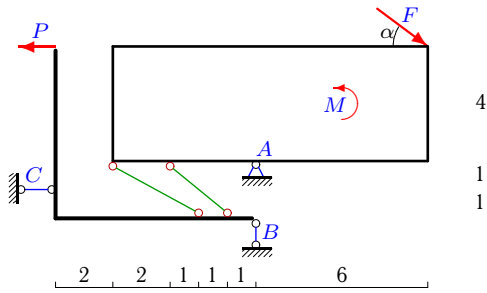
7



$F = 35 \text{ кН}, P = 4 \text{ кН}, M = 21 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.14.

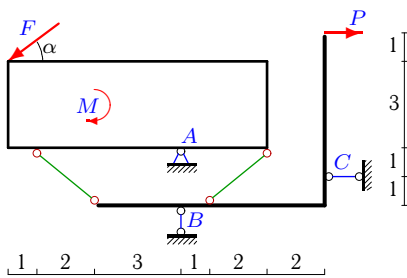
7



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 35 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.15.

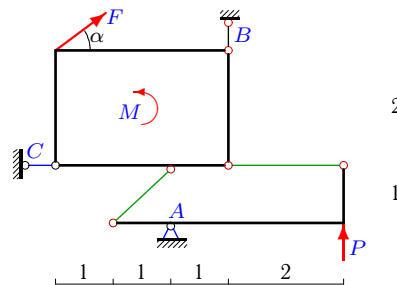
7



$F = 20 \text{ кН}, P = 5 \text{ кН}, M = 122 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.16.

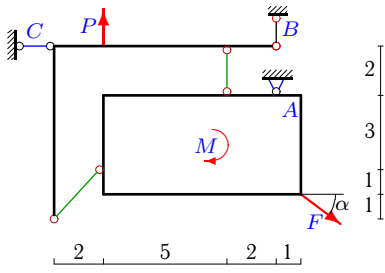
7



$F = 25 \text{ кН}, P = 1 \text{ кН}, M = 30 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.17.

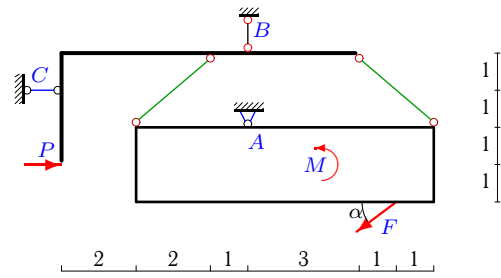
7



$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 13 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.18.

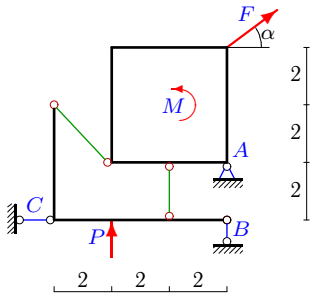
7



$F = 15 \text{ кН}, P = 1 \text{ кН}, M = 59 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.19.

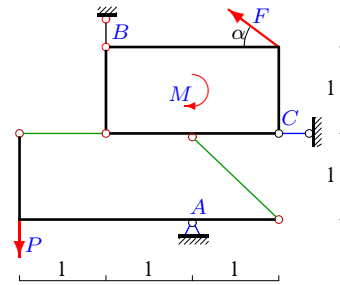
7



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 16 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.20.

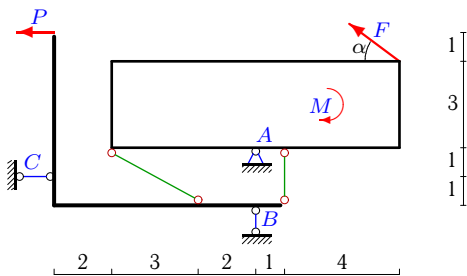
7



$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.21.

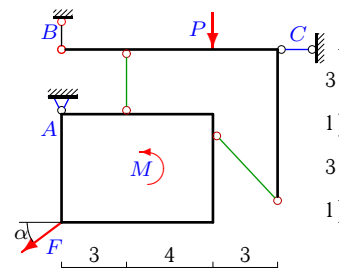
7



$F = 20 \text{ кН}, P = 3 \text{ кН}, M = 106 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.22.

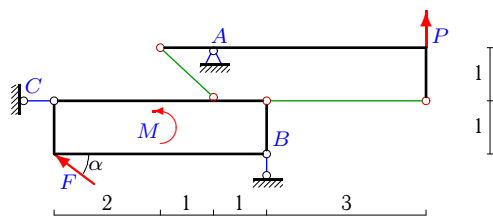
7



$F = 5 \text{ кН}, P = 9 \text{ кН}, M = 20 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.23.

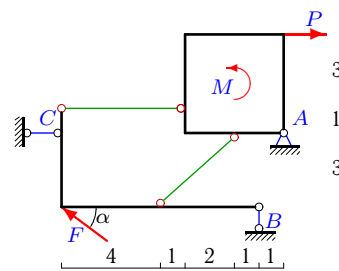
7



$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.24.

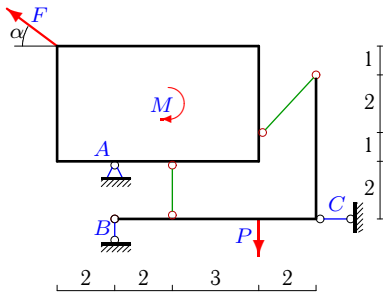
7



$F = 10 \text{ кН}, P = 1 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.25.

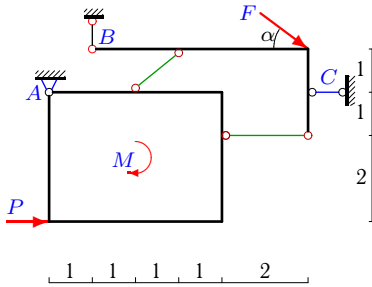
7



$F = 5 \text{ кН}, P = 10 \text{ кН}, M = 10 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.27.

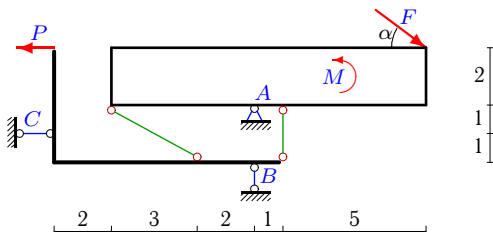
7



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.29.

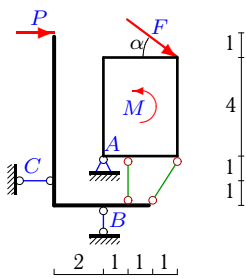
7



$F = 10 \text{ кН}, P = 2 \text{ кН}, M = 53 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.31.

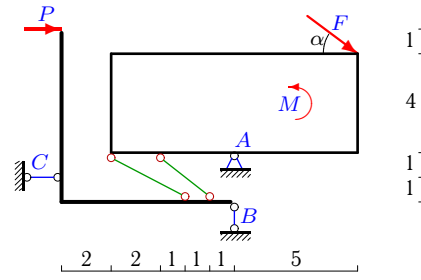
7



$F = 20 \text{ кН}, P = 2 \text{ кН}, M = 103 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.26.

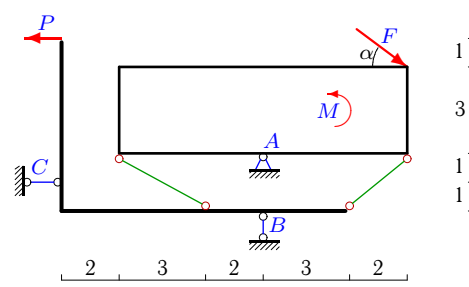
7



$F = 20 \text{ кН}, P = 4 \text{ кН}, M = 127 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.28.

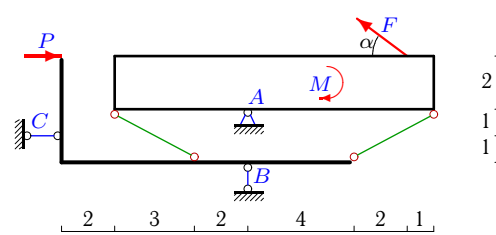
7



$F = 20 \text{ кН}, P = 5 \text{ кН}, M = 110 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.30.

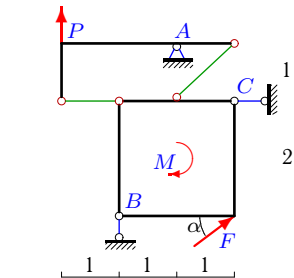
7



$F = 15 \text{ кН}, P = 1 \text{ кН}, M = 77 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.32.

7



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 3 \text{ кНм}, \cos \alpha = 0.8.$

S31 Ответы.
Конструкция из пластины и уголка

03.12.2011

№	X_A	Y_A	R_B	R_C
1	-15	-6	21	-3
2	-4	-15	8	4
3	-3	8	4	1
4	-34	32	-35	36
5	-10	6	3	6
6	31	32	35	-36
7	-38	-36	-39	40
8	-2	50	28	26
9	7	-38	-41	9
10	76	-80	95	-100
11	-127	-130	145	-150
12	-28	-26	-29	30
13	12	73	56	40
14	2	-20	-23	5
15	-11	-94	-106	22
16	-3	-56	40	17
17	10	-11	10	14
18	11	4	5	0
19	-6	-5	-1	-2
20	-6	-11	8	14
21	33	-78	-66	14
22	25	24	-12	-21
23	16	-11	-4	12
24	-73	72	78	-80
25	-21	22	15	25
26	-37	99	87	-17
27	17	-19	22	-23
28	11	-94	-106	22
29	-1	-21	-27	5
30	10	0	9	-1
31	-25	51	39	-7
32	-4	-13	-8	0

S31 файл o31s7A