

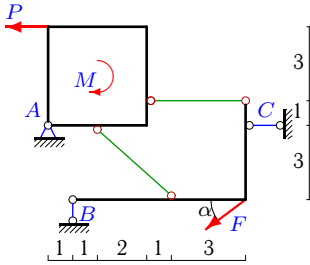
Конструкция из пластины и уголка

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.

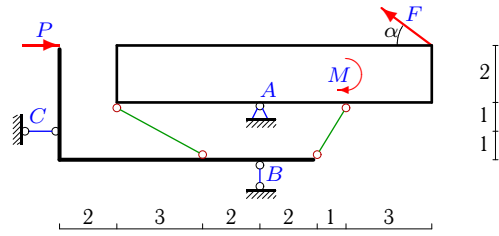
6



$$F = 5 \text{ кН}, P = 3 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.2.

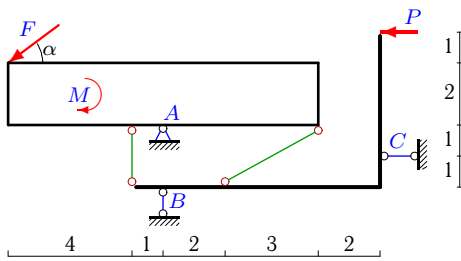
6



$$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 51 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.3.

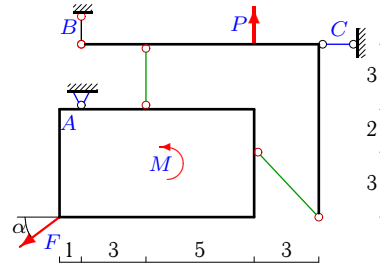
6



$$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 24 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.4.

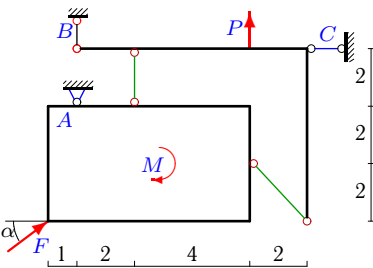
6



$$F = 20 \text{ кН}, P = 15 \text{ кН}, M = 68 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.5.

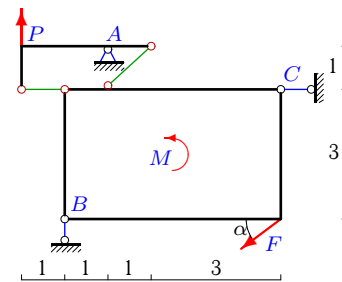
6



$$F = 15 \text{ кН}, P = 10 \text{ кН}, M = 39 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.6.

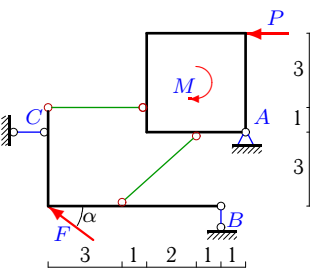
6



$$F = 30 \text{ кН}, P = 11 \text{ кН}, M = 72 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.7.

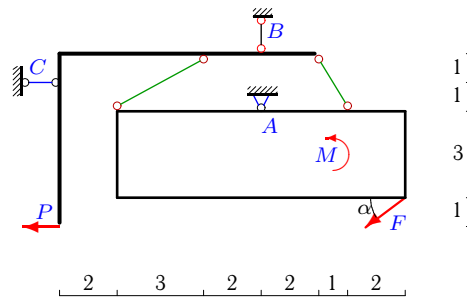
6



$$F = 20 \text{ кН}, P = 1 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.8.

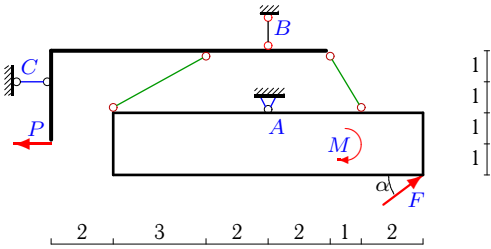
6



$$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 25 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.9.

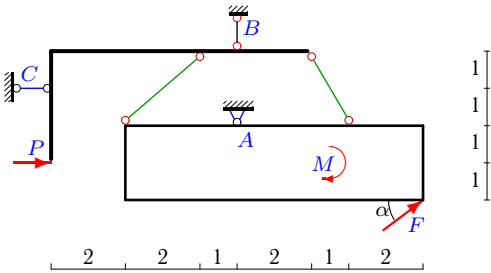
6



$F = 10 \text{ кН}, P = 1 \text{ кН}, M = 47 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.11.

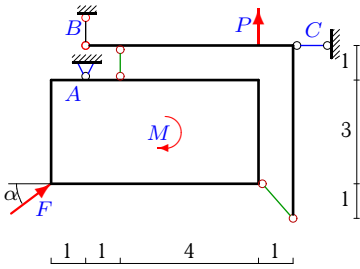
6



$F = 20 \text{ кН}, P = 1 \text{ кН}, M = 93 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.13.

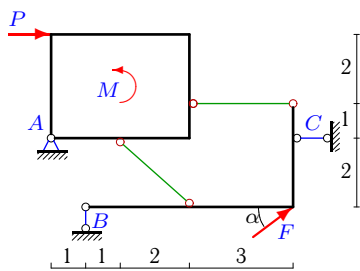
6



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

Задача S31.15.

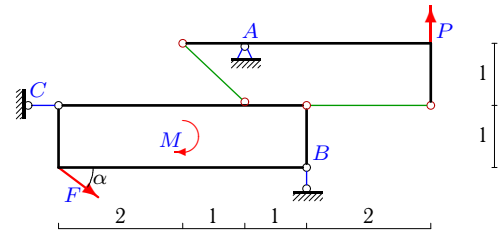
6



$F = 25 \text{ кН}, P = 2 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.10.

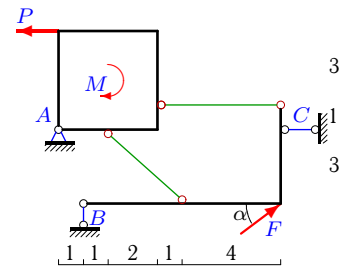
6



$F = 15 \text{ кН}, P = 4 \text{ кН}, M = 27 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.12.

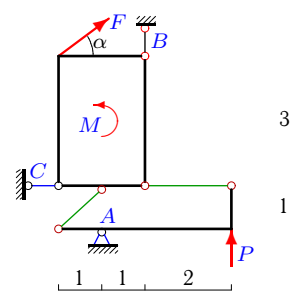
6



$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.14.

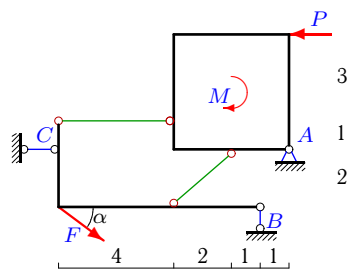
6



$F = 25 \text{ кН}, P = 1 \text{ кН}, M = 15 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.16.

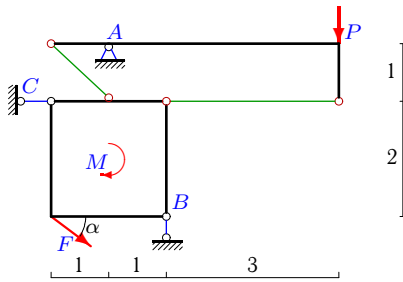
6



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

Задача S31.17.

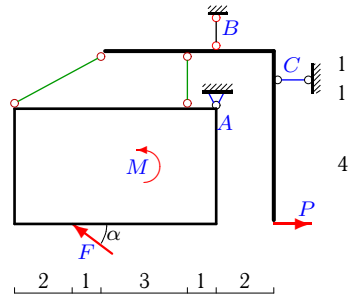
6



$F = 10 \text{ кН}, P = 1 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.18.

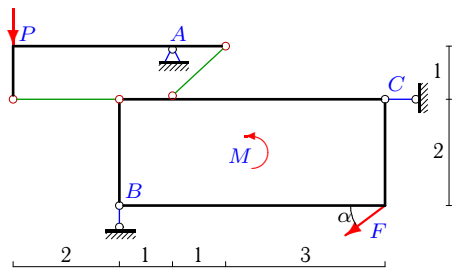
6



$F = 15 \text{ кН}, P = 1 \text{ кН}, M = 96 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.19.

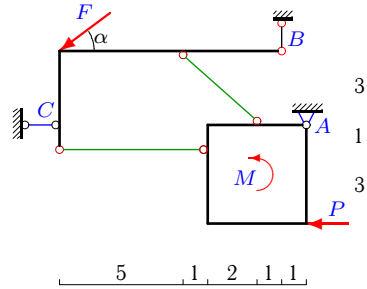
6



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

Задача S31.20.

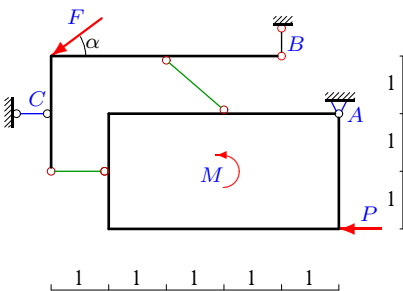
6



$F = 5 \text{ кН}, P = 3 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.21.

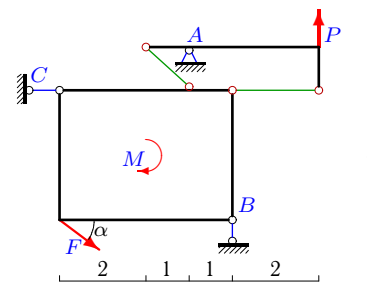
6



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

Задача S31.22.

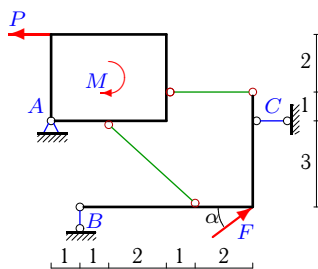
6



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

Задача S31.23.

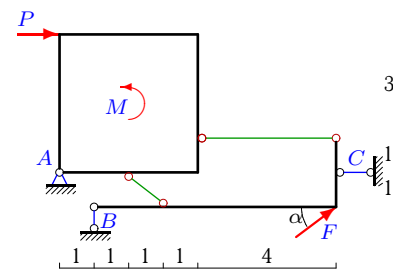
6



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

Задача S31.24.

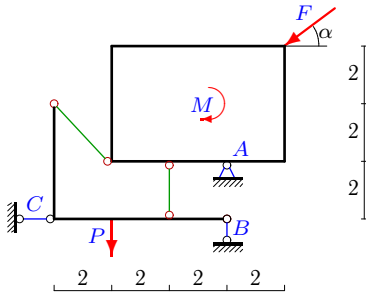
6



$F = 25 \text{ кН}, P = 6 \text{ кН}, M = 24 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.25.

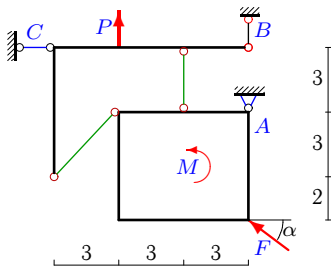
6



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 10 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.27.

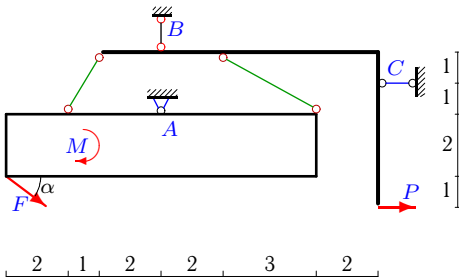
6



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

Задача S31.29.

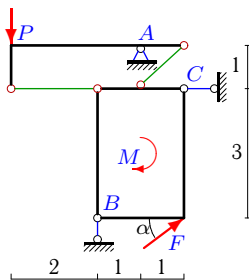
6



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 114 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.31.

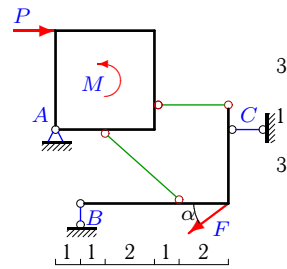
6



$F = 10 \text{ кН}, P = 1 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.26.

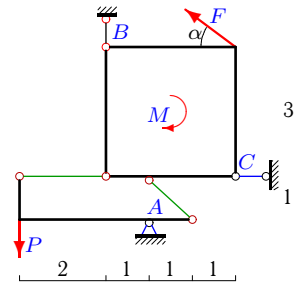
6



$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 16 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.28.

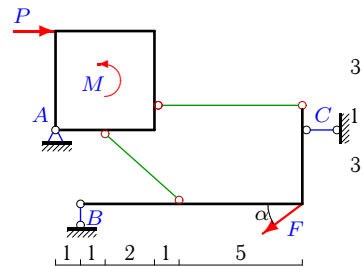
6



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

Задача S31.30.

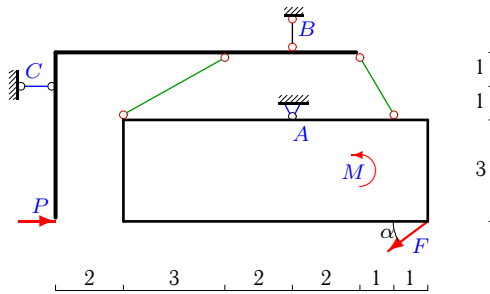
6



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

Задача S31.32.

6



$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 22 \text{ кНм}, \cos \alpha = 0.8.$

S31 Ответы.
Конструкция из пластины и уголка

03.12.2011

№	X_A	Y_A	R_B	R_C
1	-30	-33	-36	37
2	0	27	33	-5
3	19	64	61	-11
4	-24	-28	25	40
5	-42	-39	20	30
6	-22	79	72	46
7	-131	132	144	-148
8	26	89	-86	18
9	-5	5	-11	2
10	12	17	12	24
11	-17	-17	5	0
12	75	72	78	-80
13	-13	-11	4	5
14	-3	-76	60	17
15	128	130	145	-150
16	34	-29	-32	33
17	-4	23	16	4
18	4	20	-29	7
19	3	12	8	1
20	-36	-39	42	-43
21	-15	-16	19	-20
22	18	9	12	22
23	32	30	33	-34
24	119	125	140	-145
25	6	5	1	2
26	-34	-30	-33	34
27	14	-12	3	6
28	-15	-10	12	19
29	-33	66	-51	10
30	-40	-39	-42	43
31	3	-29	-24	-11
32	-10	-55	58	-10

S31 файл o31s6A