

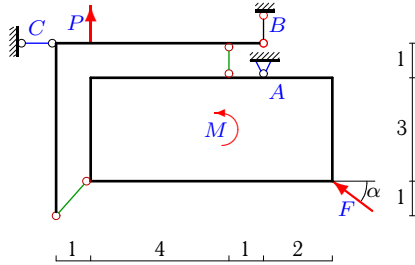
Конструкция из пластины и уголка

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.

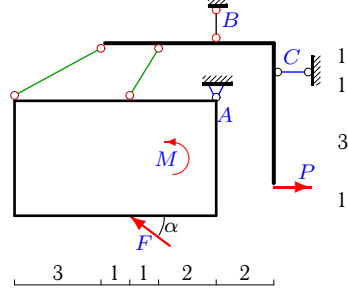
8



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

Задача S31.2.

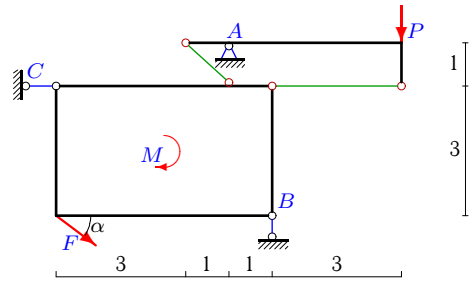
8



$$F = 10 \text{ кН}, P = 5 \text{ кН}, M = 53 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.3.

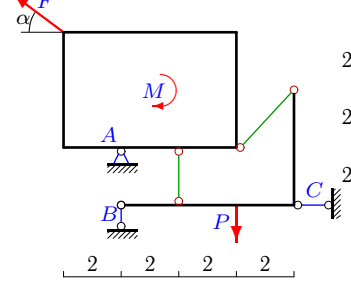
8



$$F = 10 \text{ кН}, P = 1 \text{ кН}, M = 24 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.4.

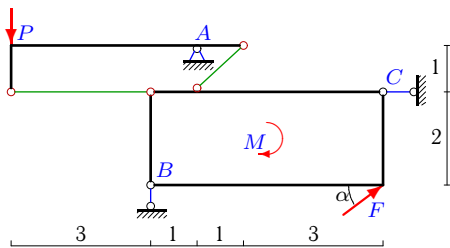
8



$$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 20 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.5.

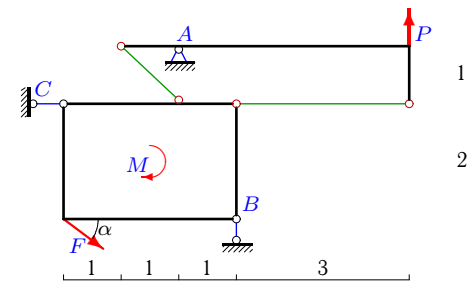
8



$$F = 15 \text{ кН}, P = 2 \text{ кН}, M = 36 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.6.

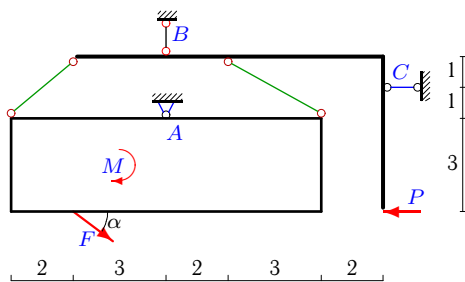
8



$$F = 35 \text{ кН}, P = 3 \text{ кН}, M = 42 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.7.

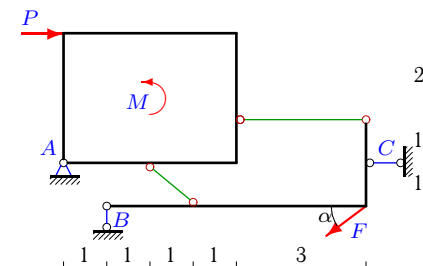
8



$$F = 5 \text{ кН}, P = 4 \text{ кН}, M = 19 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S31.8.

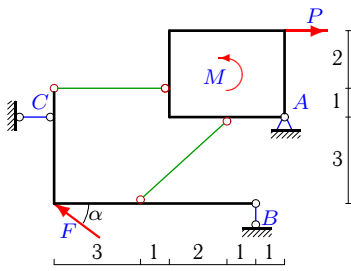
8



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

Задача S31.9.

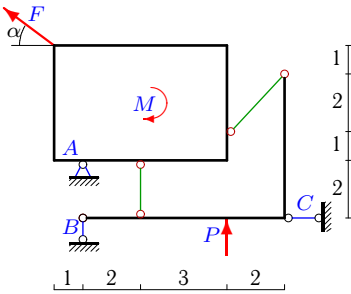
8



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

Задача S31.11.

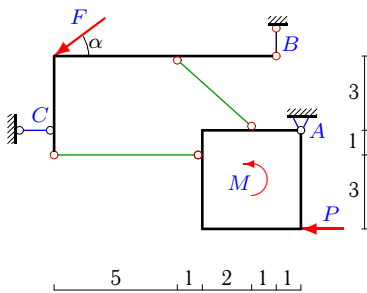
8



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 13 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.13.

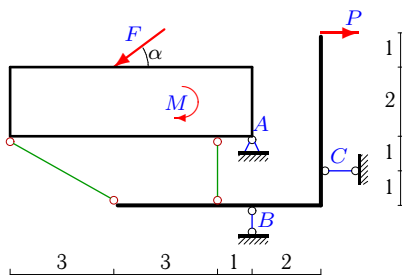
8



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

Задача S31.15.

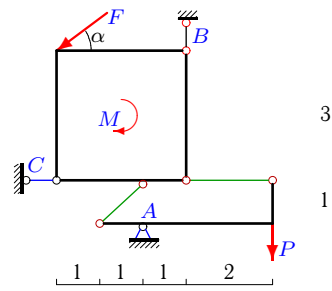
8



$F = 5 \text{ кН}, P = 5 \text{ кН}, M = 21 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.10.

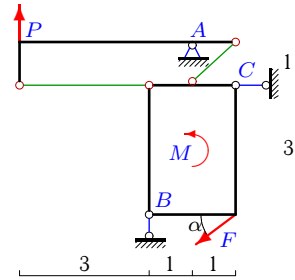
8



$F = 15 \text{ кН}, P = 1 \text{ кН}, M = 18 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.12.

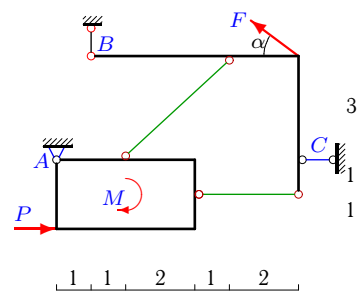
8



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

Задача S31.14.

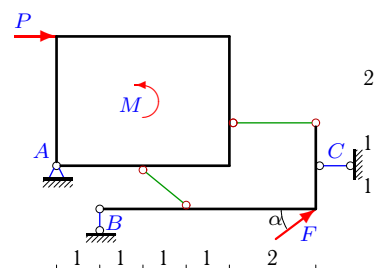
8



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

Задача S31.16.

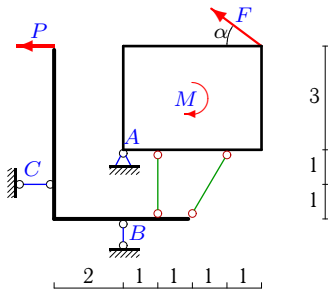
8



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

Задача S31.17.

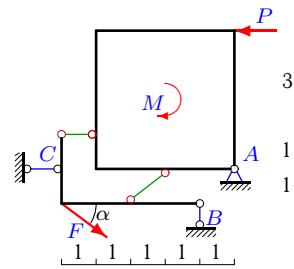
8



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

Задача S31.18.

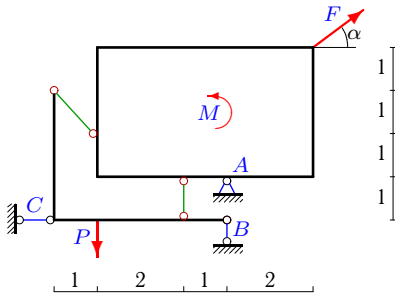
8



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

Задача S31.19.

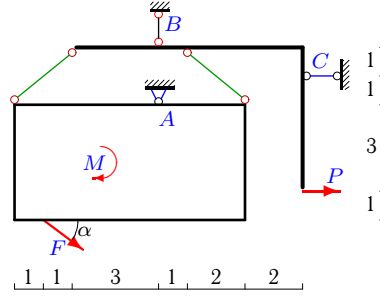
8



$F = 5 \text{ кН}, P = 1 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.20.

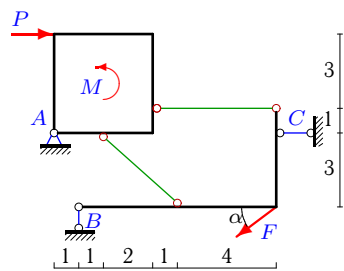
8



$F = 20 \text{ кН}, P = 2 \text{ кН}, M = 109 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.21.

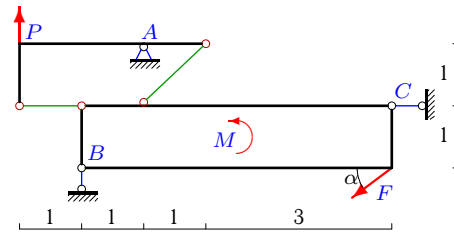
8



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

Задача S31.22.

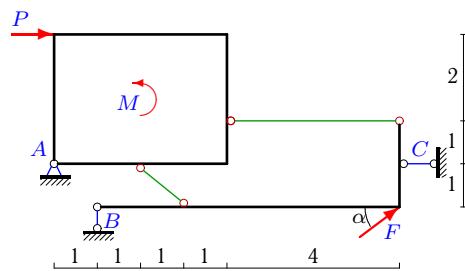
8



$F = 5 \text{ кН}, P = 2 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.23.

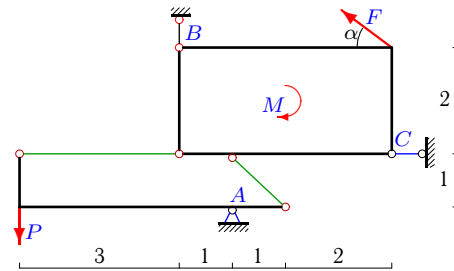
8



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

Задача S31.24.

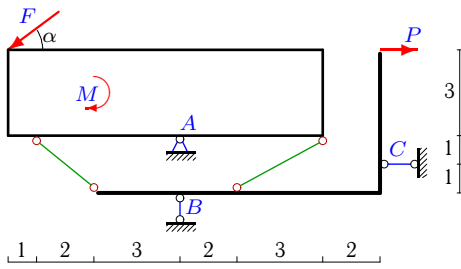
8



$F = 20 \text{ кН}, P = 1 \text{ кН}, M = 36 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.25.

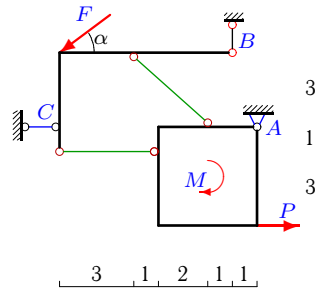
8



$F = 15 \text{ кН}, P = 5 \text{ кН}, M = 92 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.26.

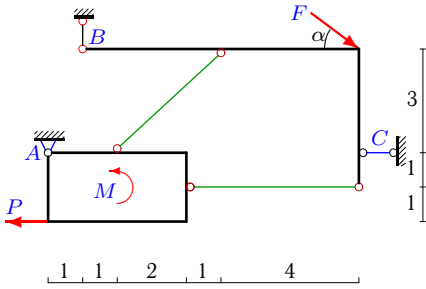
8



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

Задача S31.27.

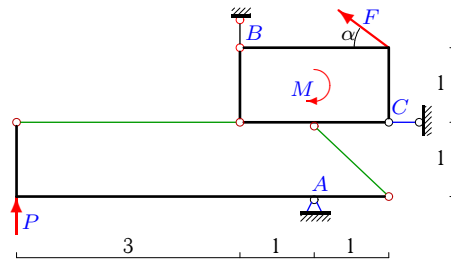
8



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

Задача S31.28.

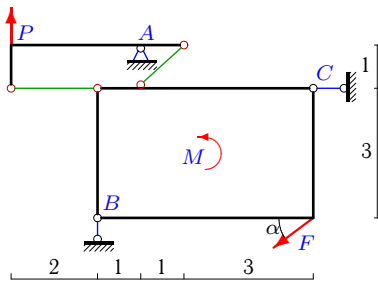
8



$F = 15 \text{ кН}, P = 2 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.29.

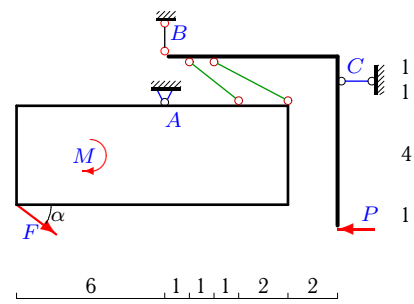
8



$F = 5 \text{ кН}, P = 11 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.30.

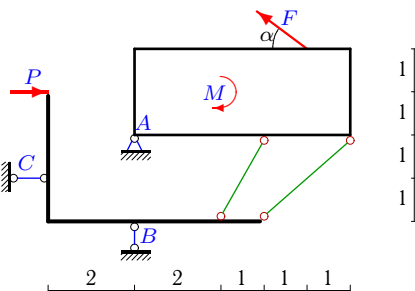
8



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 167 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.31.

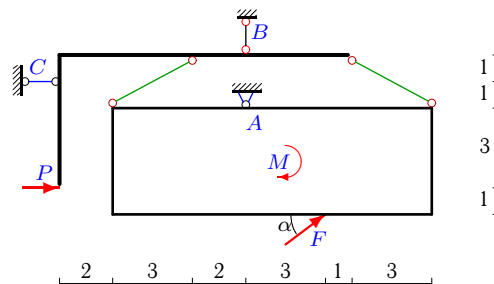
8



$F = 25 \text{ кН}, P = 3 \text{ кН}, M = 99 \text{ кНм}, \cos \alpha = 0.8.$

Задача S31.32.

8



$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 53 \text{ кНм}, \cos \alpha = 0.8.$

S31 Ответы.
Конструкция из пластины и уголка

03.12.2011

№	X_A	Y_A	R_B	R_C
1	23	-21	12	15
2	-15	83	-89	18
3	-4	31	24	4
4	2	0	3	6
5	8	-31	-24	-20
6	12	74	56	40
7	10	-55	58	-10
8	-25	-22	-25	26
9	-167	165	180	-185
10	3	46	-36	-9
11	9	-8	-3	-5
12	-4	104	84	32
13	-77	-78	84	-86
14	-31	30	-33	34
15	-17	-80	-83	16
16	18	19	22	-23
17	22	-73	-70	14
18	17	-16	-19	20
19	-1	0	2	3
20	-27	53	-41	9
21	-37	-36	-39	40
22	-4	5	4	8
23	123	125	140	-145
24	-4	-43	32	20
25	-10	-77	-86	17
26	-34	-33	36	-37
27	38	-36	39	-40
28	8	-23	12	4
29	-33	4	12	37
30	-5	-48	63	-12
31	15	6	21	-2
32	-17	-45	39	-6

S31 файл o31s8A