

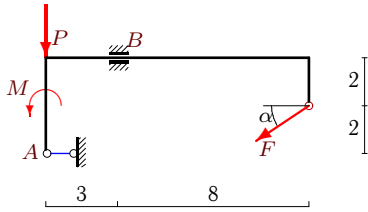
Равновесие рамы

Определить реакции опор рамы.

Кирсанов М.Н. Задачи по теоретической механике с решениями в **Maple 11.** – М.: ФИЗМАТЛИТ, 2010. – 264 с. (с.10)

Задача S29.1.

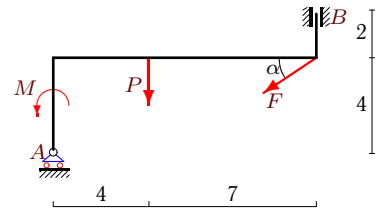
2



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

Задача S29.2.

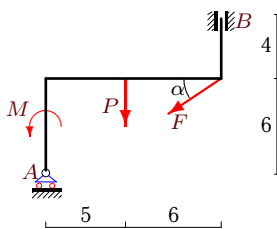
2



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

Задача S29.3.

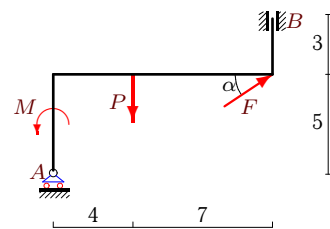
2



$$F = 20 \text{ кН}, P = 3 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S29.4.

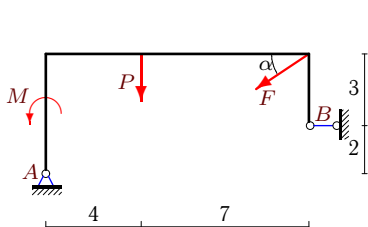
2



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

Задача S29.5.

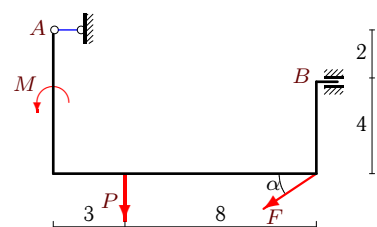
2



$$F = 20 \text{ кН}, P = 3 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S29.6.

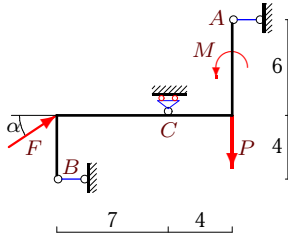
2



$$F = 80 \text{ кН}, P = 1 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S29.7.

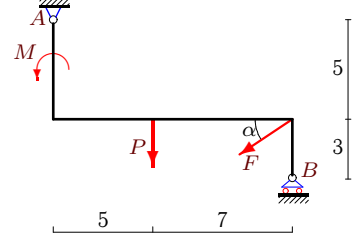
2



$$F = 50 \text{ кН}, P = 1 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S29.8.

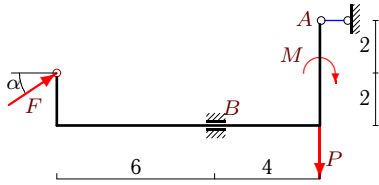
2



$$F = 60 \text{ кН}, P = 5 \text{ кН}, M = 25 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S29.9.

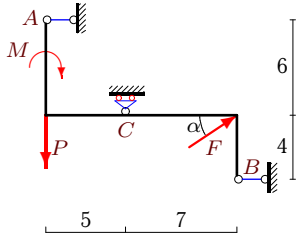
2



$F = 15 \text{ кН}, P = 18 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.11.

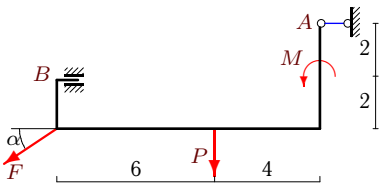
2



$F = 100 \text{ кН}, P = 3 \text{ кН}, M = 15 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.13.

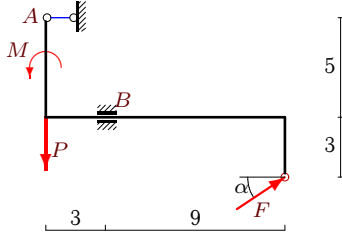
2



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

Задача S29.15.

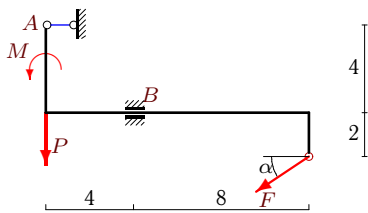
2



$F = 10 \text{ кН}, P = 3 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.17.

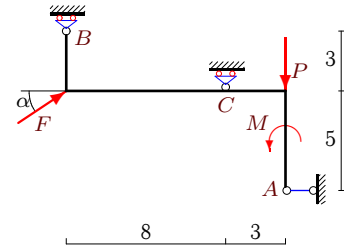
2



$F = 40 \text{ кН}, P = 24 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.10.

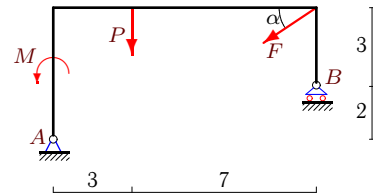
2



$F = 40 \text{ кН}, P = 3 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.12.

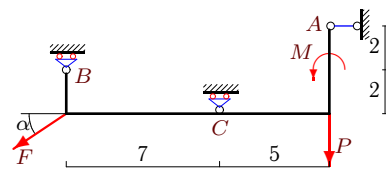
2



$F = 50 \text{ кН}, P = 3 \text{ кН}, M = 9 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.14.

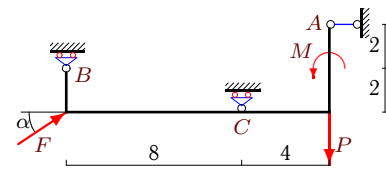
2



$F = 35 \text{ кН}, P = 4 \text{ кН}, M = 20 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.16.

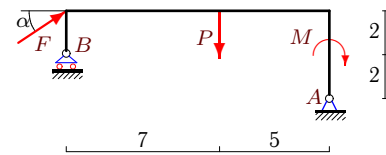
2



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

Задача S29.18.

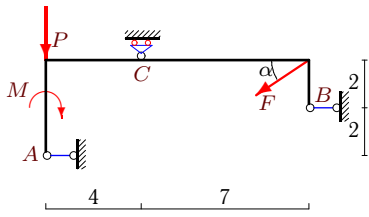
2



$F = 120 \text{ кН}, P = 5 \text{ кН}, M = 25 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.19.

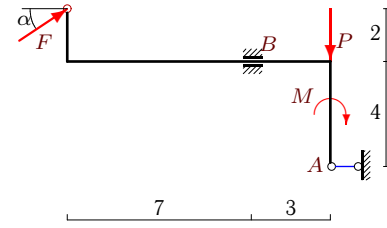
2



$F = 10 \text{ кН}, P = 5 \text{ кН}, M = 20 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.20.

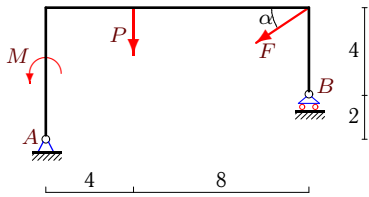
2



$F = 15 \text{ кН}, P = 12 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.21.

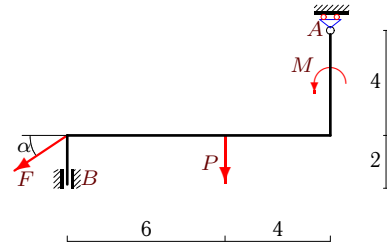
2



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

Задача S29.22.

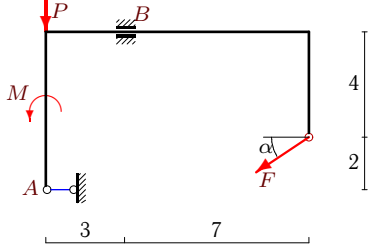
2



$F = 20 \text{ кН}, P = 4 \text{ кН}, M = 3 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.23.

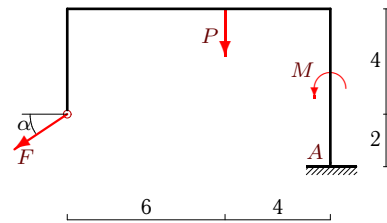
2



$F = 35 \text{ кН}, P = 12 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.24.

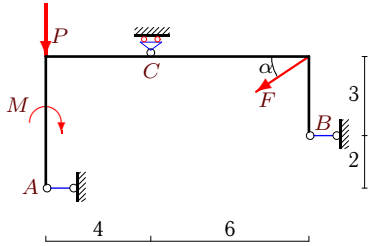
2



$F = 30 \text{ кН}, P = 3 \text{ кН}, M = 5 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.25.

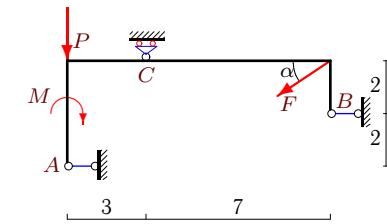
2



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

Задача S29.26.

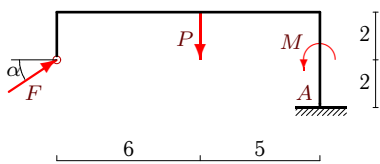
2



$F = 10 \text{ кН}, P = 4 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.27.

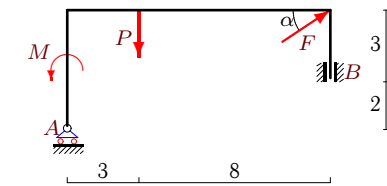
2



$F = 10 \text{ кН}, P = 4 \text{ кН}, M = 5 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.28.

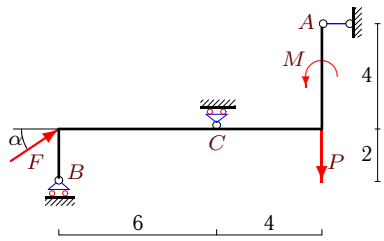
2



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

Задача S29.29.

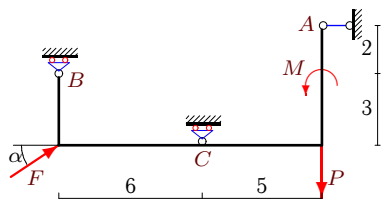
2



$F = 15 \text{ кН}, P = 1 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.31.

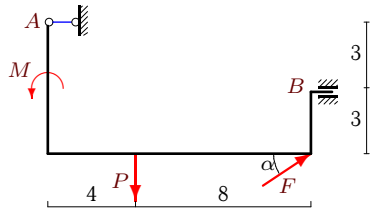
2



$F = 15 \text{ кН}, P = 1 \text{ кН}, M = 5 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.33.

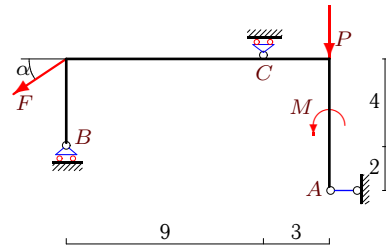
2



$F = 35 \text{ кН}, P = 2 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.30.

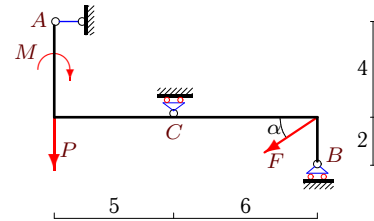
2



$F = 45 \text{ кН}, P = 11 \text{ кН}, M = 33 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.32.

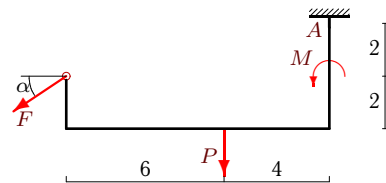
2



$F = 15 \text{ кН}, P = 3 \text{ кН}, M = 15 \text{ кНм}, \cos \alpha = 0.8.$

Задача S29.34.

2



$F = 30 \text{ кН}, P = 4 \text{ кН}, M = 3 \text{ кНм}, \cos \alpha = 0.8.$

S29 Ответы.
Равновесие рамы

03.12.2011

№	X_A	Y_A	M_A	X_B	Y_B	M_B	Y_C
1	16	—	—	—	21	32	—
2	—	14	—	12	—	138	—
3	—	15	—	16	—	204	—
4	—	-1	—	-4	—	-43	—
5	42	15	—	-26	—	—	—
6	64	—	—	—	49	367	—
7	-37	—	—	-3	—	—	-29
8	48	-15	—	—	56	—	—
9	-12	—	—	—	9	109	—
10	-32	—	—	—	-44	—	23
11	10	—	—	-90	—	—	-57
12	40	23	—	—	10	—	—
13	12	—	—	—	10	53	—
14	28	—	—	—	5	—	20
15	-8	—	—	—	-3	-134	—
16	-16	—	—	—	-4	—	-7
17	32	—	—	—	48	281	—
18	-96	37	—	—	-104	—	—
19	13	—	—	-5	—	—	11
20	-12	—	—	—	3	178	—
21	16	9	—	—	4	—	—
22	—	16	—	16	—	-171	—
23	28	—	—	—	33	48	—
24	24	21	-245	—	—	—	—
25	3	—	—	1	—	—	5
26	13	—	—	-5	—	—	10
27	-8	-2	57	—	—	—	—
28	—	-2	—	-4	—	-24	—
29	-12	—	—	—	-1	—	-7
30	36	—	—	—	51	—	-13
31	-12	—	—	—	1	—	-9
32	12	—	—	—	17	—	-5
33	-28	—	—	—	-19	-196	—
34	24	22	-151	—	—	—	—

S29 файл о29s2A