

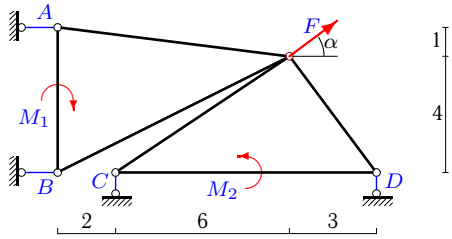
## Простая составная конструкция

Определить реакции опор конструкции (в кН), состоящей из двух тел.

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

**Задача S24.1.**

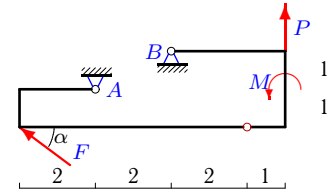
4



$$F = 5 \text{ кН}, M_1 = 9 \text{ кНм}, M_2 = 18 \text{ кНм}, \cos \alpha = 0.8.$$

**Задача S24.2.**

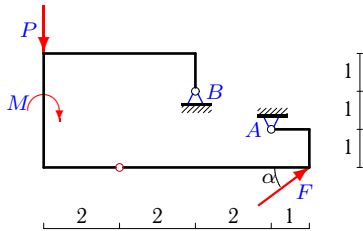
4



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

**Задача S24.3.**

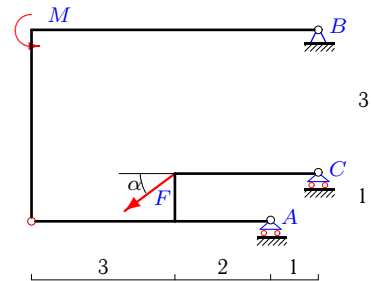
4



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

**Задача S24.4.**

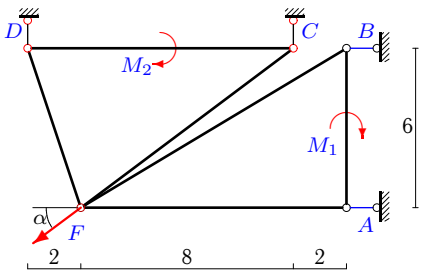
4



$$F = 15 \text{ кН}, M = 72 \text{ кНм}, \cos \alpha = 0.8.$$

**Задача S24.5.**

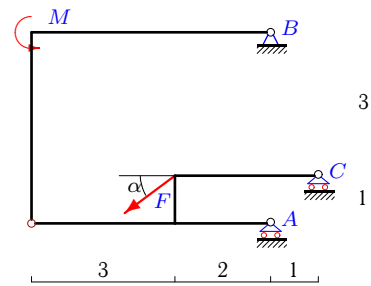
4



$$F = 25 \text{ кН}, M_1 = 6 \text{ кНм}, M_2 = 30 \text{ кНм}, \cos \alpha = 0.8.$$

**Задача S24.6.**

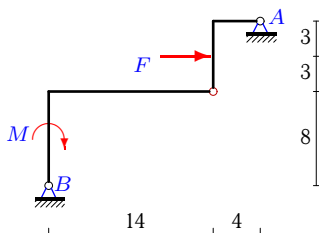
4



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

**Задача S24.7.**

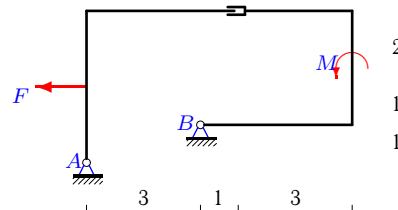
4



$$F = 12 \text{ кН}, M = 4 \text{ кНм}.$$

**Задача S24.8.**

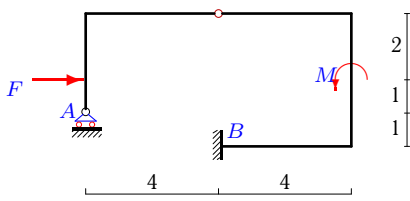
4



$$F = 3 \text{ кН}, M = 6 \text{ кНм}.$$

**Задача S24.9.**

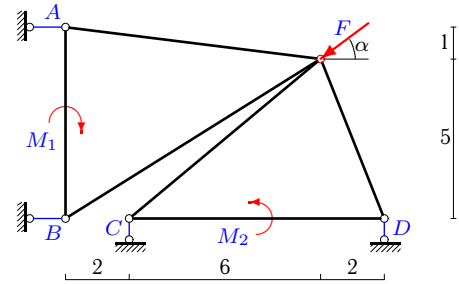
4



$F = 8 \text{ кН}, M = 11 \text{ кНм}.$

**Задача S24.10.**

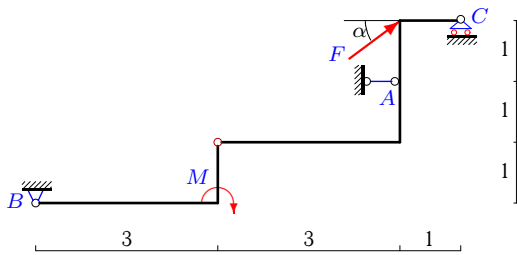
4



$F = 10 \text{ кН}, M_1 = 10 \text{ кНм}, M_2 = 76 \text{ кНм}, \cos \alpha = 0.8.$

**Задача S24.11.**

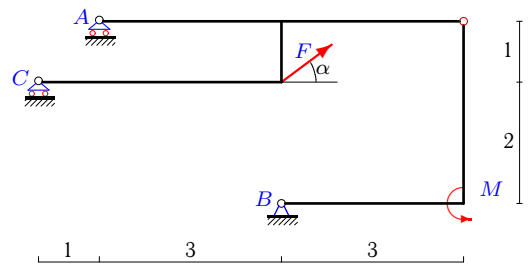
4



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

**Задача S24.12.**

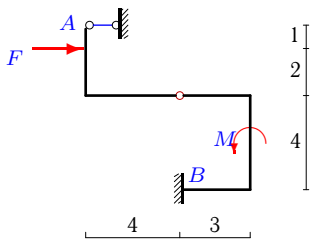
4



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

**Задача S24.13.**

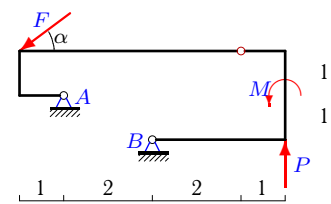
4



$F = 3 \text{ кН}, M = 8 \text{ кНм}.$

**Задача S24.14.**

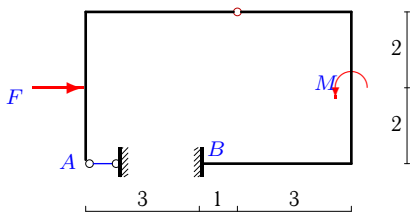
4



$P = 6 \text{ кН}, F = 30 \text{ кН}, M = 12 \text{ кНм}, \cos \alpha = 0.8.$

**Задача S24.15.**

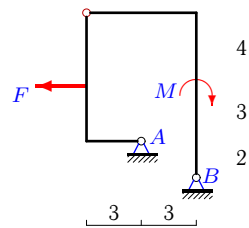
4



$F = 2 \text{ кН}, M = 7 \text{ кНм}.$

**Задача S24.16.**

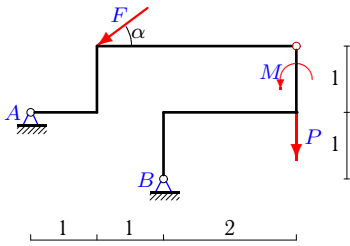
4



$F = 3 \text{ кН}, M = 3 \text{ кНм}.$

**Задача S24.17.**

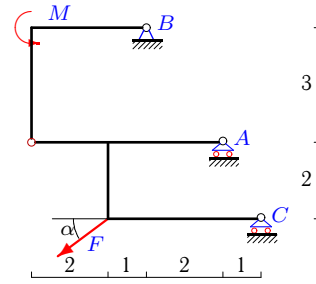
4



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

**Задача S24.18.**

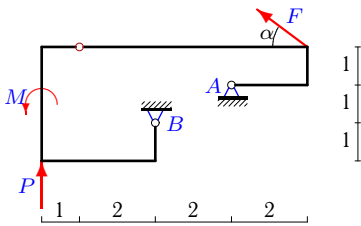
4



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

**Задача S24.19.**

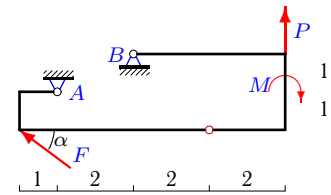
4



$P = 6 \text{ кН}, F = 30 \text{ кН}, M = 12 \text{ кНм},$   
 $\cos \alpha = 0.8.$

**Задача S24.20.**

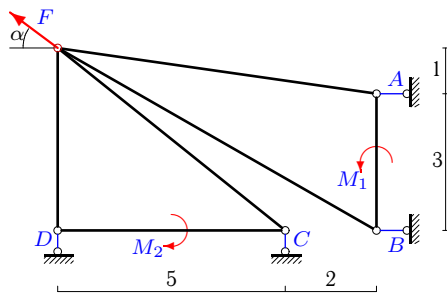
4



$P = 6 \text{ кН}, F = 30 \text{ кН}, M = 6 \text{ кНм},$   
 $\cos \alpha = 0.8.$

**Задача S24.21.**

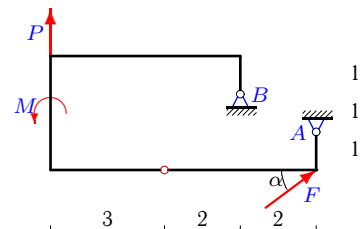
4



$F = 5 \text{ кН}, M_1 = 5 \text{ кНм}, M_2 = 15 \text{ кНм},$   
 $\cos \alpha = 0.8.$

**Задача S24.22.**

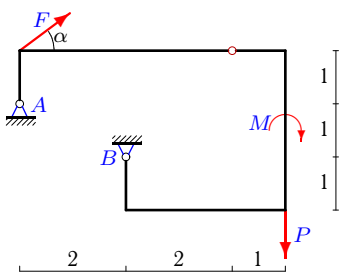
4



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

**Задача S24.23.**

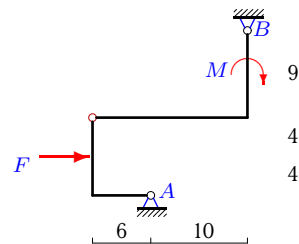
4



$P = 6 \text{ кН}, F = 30 \text{ кН}, M = 12 \text{ кНм},$   
 $\cos \alpha = 0.8.$

**Задача S24.24.**

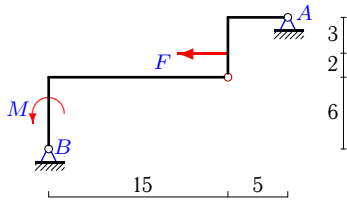
4



$F = 11 \text{ кН}, M = 4 \text{ кНм}.$

Задача S24.25.

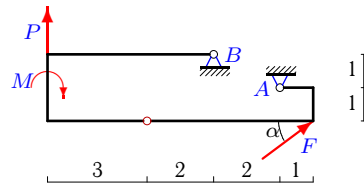
4



$F = 5 \text{ кН}, M = 9 \text{ кНм}.$

Задача S24.26.

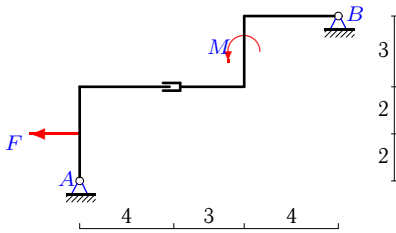
4



$P = 6 \text{ кН}, F = 15 \text{ кН}, M = 6 \text{ кНм},$   
 $\cos \alpha = 0.8.$

Задача S24.27.

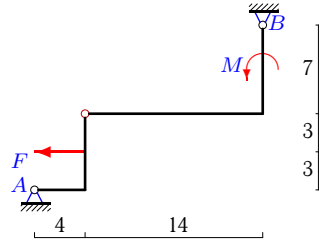
4



$F = 11 \text{ кН}, M = 33 \text{ кНм}.$

Задача S24.28.

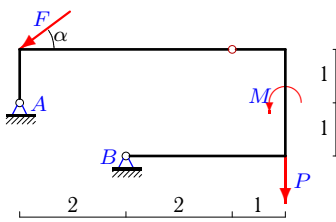
4



$F = 2 \text{ кН}, M = 7 \text{ кНм}.$

Задача S24.29.

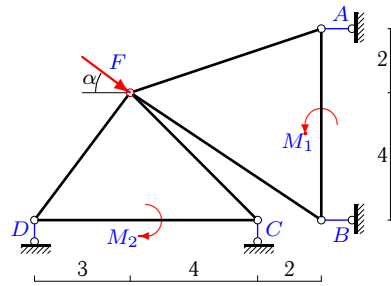
4



$P = 4 \text{ кН}, F = 10 \text{ кН}, M = 2 \text{ кНм},$   
 $\cos \alpha = 0.8.$

Задача S24.30.

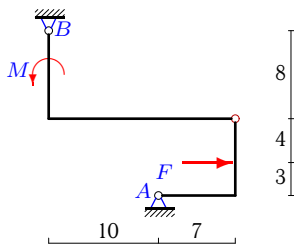
4



$F = 5 \text{ кН}, M_1 = 4 \text{ кНм}, M_2 = 40 \text{ кНм},$   
 $\cos \alpha = 0.8.$

Задача S24.31.

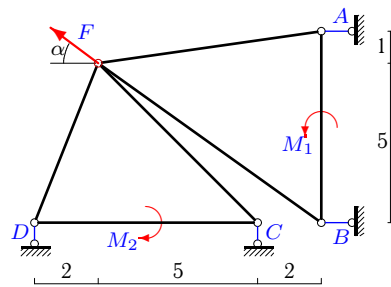
4



$F = 7 \text{ кН}, M = 1 \text{ кНм}.$

Задача S24.32.

4



$F = 5 \text{ кН}, M_1 = 16 \text{ кНм}, M_2 = 20 \text{ кНм},$   
 $\cos \alpha = 0.8.$

**S24 Ответы.**  
**Простая составная конструкция**

15.06.2012

№	$X_A$	$Y_A$	$X_B$	$Y_B$	$Y_C$	$M_B$	$Y_D$
1	-5	-	1	-	1	-	-4
2	14	-17	-2	5	-	-	-
3	-43	-22	31	25	-	-	-
4	-	63	12	-4	-50	-	-
5	21	-	-1	-	6	-	9
6	-	44	8	-3	-35	-	-
7	-2	6	-10	-6	-	-	-
8	3	4	0	-4	-	-	-
9	-	4	-8	-4	-	21	-
10	5	-	3	-	11	-	-5
11	-7	-	3	-1	-2	-	-
12	-	-9	-4	-1	7	-	-
13	-2	-	-1	0	-	-4	-
14	58	37	-34	-25	-	-	-
15	-1	-	-1	0	-	-3	-
16	0	4	3	-4	-	-	-
17	3	3	1	2	-	-	-
18	-	-8	4	2	9	-	-
19	40	-37	-16	13	-	-	-
20	26	-29	-2	5	-	-	-
21	7	-	-3	-	3	-	-6
22	0	-3	-4	-2	-	-	-
23	-52	-31	28	19	-	-	-
24	-7	2	-4	-2	-	-	-
25	-1	-3	6	3	-	-	-
26	5	-10	-17	-5	-	-	-
27	11	5	0	-5	-	-	-
28	1	0	1	0	-	-	-
29	4	7	4	3	-	-	-
30	-2	-	-2	-	7	-	-4
31	-5	-1	-2	1	-	-	-
32	6	-	-2	-	2	-	-5

S24 файл o24s4H