

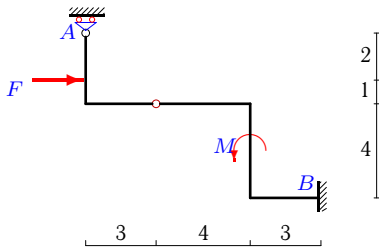
Простая составная конструкция

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.

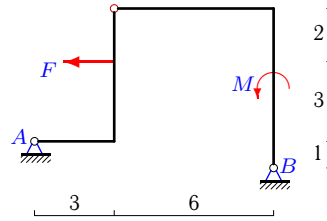
7



$$F = 3 \text{ кН}, M = 9 \text{ кНм.}$$

Задача S24.2.

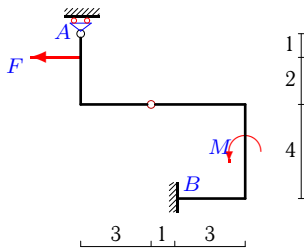
7



$$F = 1 \text{ кН}, M = 6 \text{ кНм.}$$

Задача S24.3.

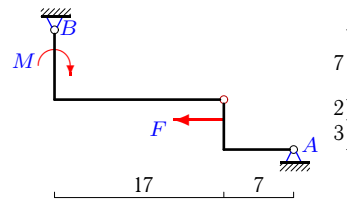
7



$$F = 6 \text{ кН}, M = 9 \text{ кНм.}$$

Задача S24.4.

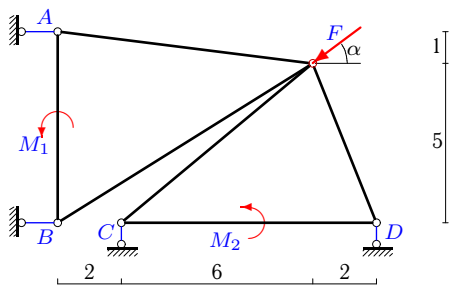
7



$$F = 1 \text{ кН}, M = 3 \text{ кНм.}$$

Задача S24.5.

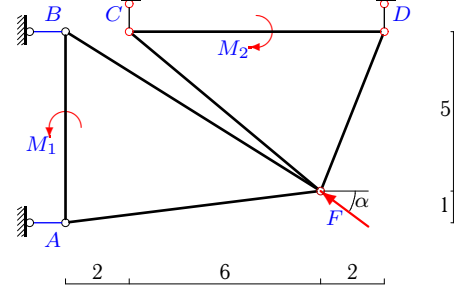
7



$$F = 5 \text{ кН}, M_1 = 16 \text{ кНм}, M_2 = 58 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S24.6.

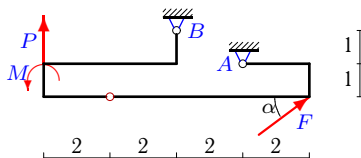
7



$$F = 5 \text{ кН}, M_1 = 2 \text{ кНм}, M_2 = 42 \text{ кНм}, \cos \alpha = 0.8.$$

Задача S24.7.

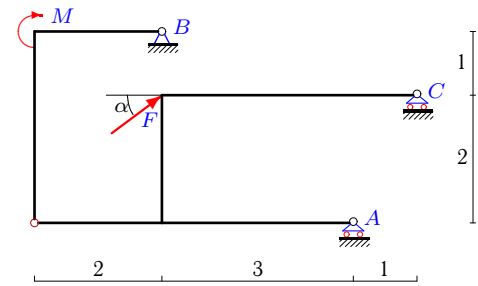
7



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

Задача S24.8.

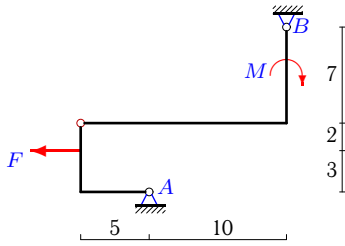
7



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

Задача S24.9.

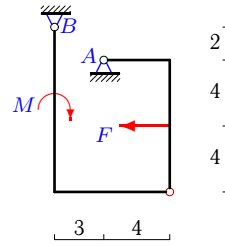
7



$F = 5 \text{ кН}, M = 1 \text{ кНм}.$

Задача S24.10.

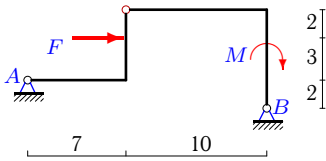
7



$F = 1 \text{ кН}, M = 5 \text{ кНм}.$

Задача S24.11.

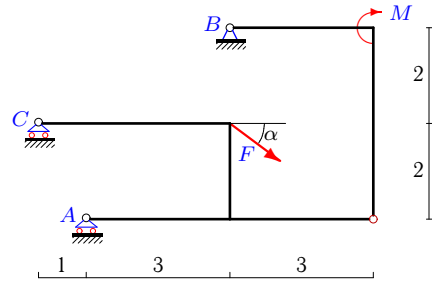
7



$F = 4 \text{ кН}, M = 3 \text{ кНм}.$

Задача S24.12.

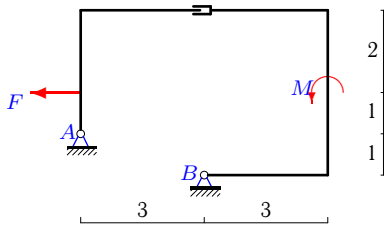
7



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

Задача S24.13.

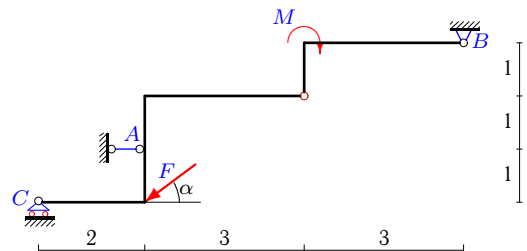
7



$F = 1 \text{ кН}, M = 2 \text{ кНм}.$

Задача S24.14.

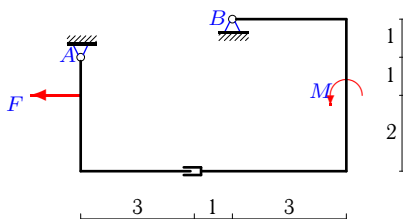
7



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

Задача S24.15.

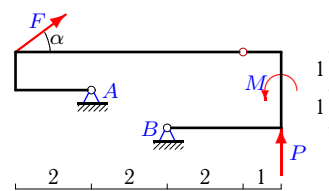
7



$F = 4 \text{ кН}, M = 16 \text{ кНм}.$

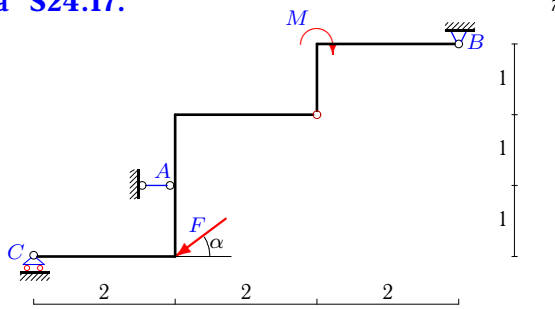
Задача S24.16.

7



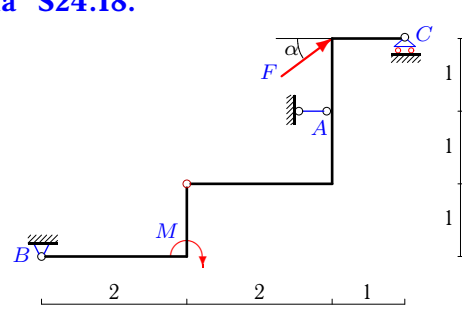
$P = 2 \text{ кН}, F = 10 \text{ кН}, M = 4 \text{ кНм}, \cos \alpha = 0.8.$

Задача S24.17.



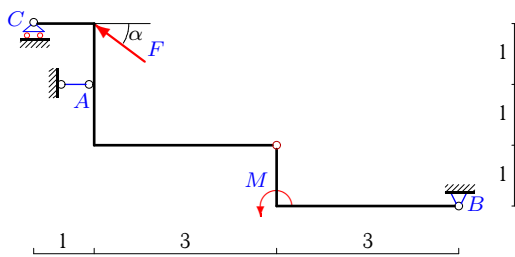
$F = 10 \text{ кН}, M = 6 \text{ кНм}, \cos \alpha = 0.8.$

Задача S24.18.



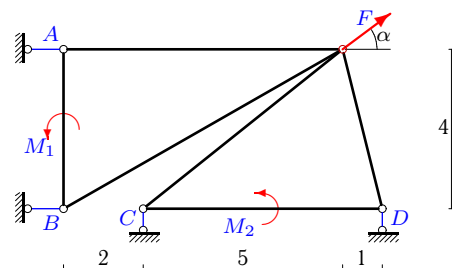
$F = 10 \text{ кН}, M = 7 \text{ кНм}, \cos \alpha = 0.8.$

Задача S24.19.



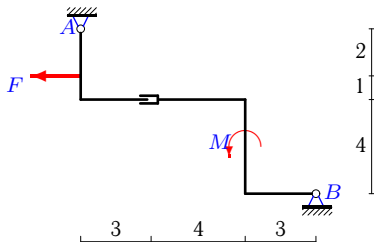
$F = 5 \text{ кН}, M = 5 \text{ кНм}, \cos \alpha = 0.8.$

Задача S24.20.



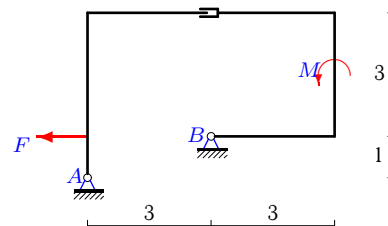
$F = 5 \text{ кН}, M_1 = 8 \text{ кНм}, M_2 = 27 \text{ кНм}, \cos \alpha = 0.8.$

Задача S24.21.



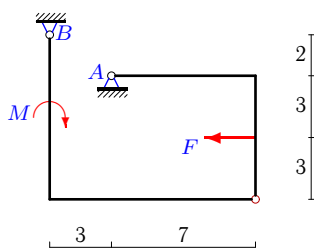
$F = 10 \text{ кН}, M = 30 \text{ кНм}.$

Задача S24.22.



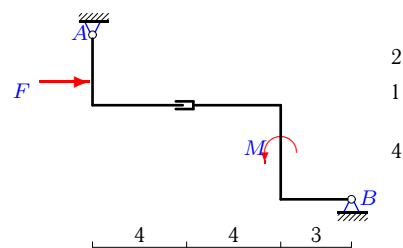
$F = 2 \text{ кН}, M = 1 \text{ кНм}.$

Задача S24.23.



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

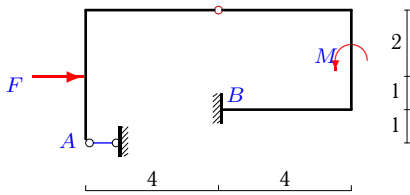
Задача S24.24.



$F = 11 \text{ кН}, M = 22 \text{ кНм}.$

Задача S24.25.

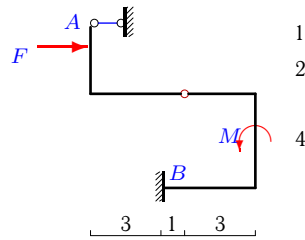
7



$F = 4 \text{ кН}, M = 7 \text{ кНм}.$

Задача S24.26.

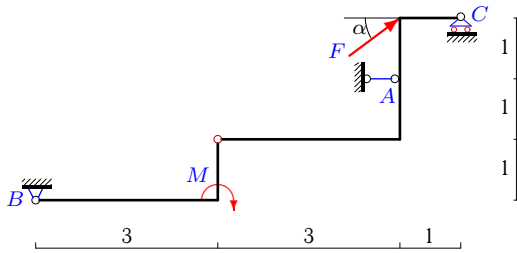
7



$F = 3 \text{ кН}, M = 5 \text{ кНм}.$

Задача S24.27.

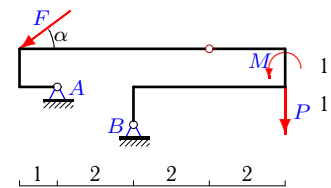
7



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

Задача S24.28.

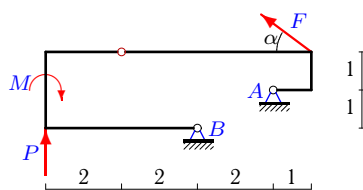
7



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

Задача S24.29.

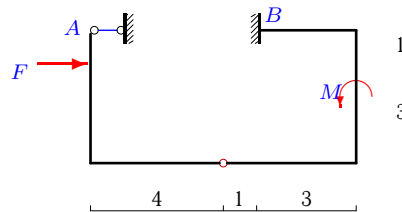
7



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

Задача S24.30.

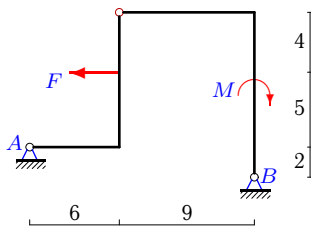
7



$F = 8 \text{ кН}, M = 13 \text{ кНм}.$

Задача S24.31.

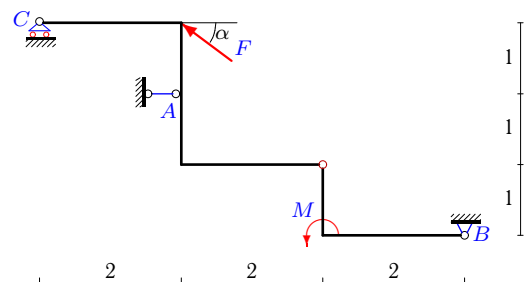
7



$F = 3 \text{ кН}, M = 2 \text{ кНм}.$

Задача S24.32.

7



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

S24 Ответы.
Простая составная конструкция

15.06.2012

| № | X_A | Y_A | X_B | Y_B | Y_C | M_B | Y_D |
|----|-------|-------|-------|-------|-------|-------|-------|
| 1 | - | -1 | -3 | 1 | - | -4 | - |
| 2 | 1 | 1 | 0 | -1 | - | - | - |
| 3 | - | 4 | 6 | -4 | - | -29 | - |
| 4 | -1 | 1 | 2 | -1 | - | - | - |
| 5 | 6 | - | -2 | - | 8 | - | -5 |
| 6 | 3 | - | 1 | - | -6 | - | 3 |
| 7 | -10 | -16 | -2 | 1 | - | - | - |
| 8 | - | -32 | -4 | 2 | 27 | - | - |
| 9 | 3 | -1 | 2 | 1 | - | - | - |
| 10 | -2 | 5 | 3 | -5 | - | - | - |
| 11 | -3 | -1 | -1 | 1 | - | - | - |
| 12 | - | 13 | -4 | 1 | -11 | - | - |
| 13 | 1 | 1 | 0 | -1 | - | - | - |
| 14 | 4 | - | 0 | 2 | 1 | - | - |
| 15 | 4 | 3 | 0 | -3 | - | - | - |
| 16 | -8 | -11 | 0 | 3 | - | - | - |
| 17 | 0 | - | 8 | 7 | -1 | - | - |
| 18 | -1 | - | -7 | -7 | 1 | - | - |
| 19 | 3 | - | -1 | 2 | -1 | - | - |
| 20 | -2 | - | -2 | - | 4 | - | -7 |
| 21 | 10 | 1 | 0 | -1 | - | - | - |
| 22 | 2 | 1 | 0 | -1 | - | - | - |
| 23 | -33 | 30 | 37 | -30 | - | - | - |
| 24 | -11 | 4 | 0 | -4 | - | - | - |
| 25 | -2 | - | -2 | 0 | - | -1 | - |
| 26 | -2 | - | -1 | 0 | - | -1 | - |
| 27 | -3 | - | -1 | -2 | -1 | - | - |
| 28 | 7 | 13 | 5 | 2 | - | - | - |
| 29 | 6 | -9 | 2 | 1 | - | - | - |
| 30 | -6 | - | -2 | 0 | - | -21 | - |
| 31 | 2 | 1 | 1 | -1 | - | - | - |
| 32 | -2 | - | -6 | 4 | 1 | - | - |

S24 файл o24s7H