

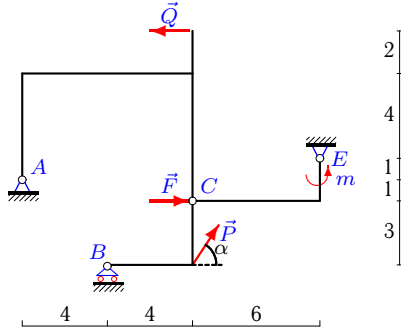
Составная конструкция 3 тел

Определить реакции опор конструкции (в кН), состоящей из трех тел, соединенных в точке C шарниром. Размеры указаны в метрах.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2008.– 384 с. (с.67.)

Задача 16.1.

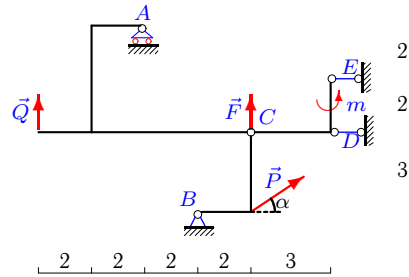
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$P = 7$ кН, $Q = 1$ кН, $F = 2$ кН,
 $m = 3$ кНм, $\alpha = 60^\circ$.

Задача 16.2.

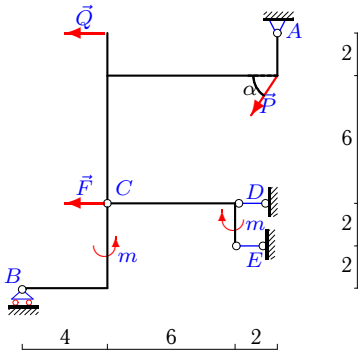
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$P = 2$ кН, $Q = 3$ кН, $F = 5$ кН,
 $m = 3$ кНм, $\alpha = 30^\circ$.

Задача 16.3.

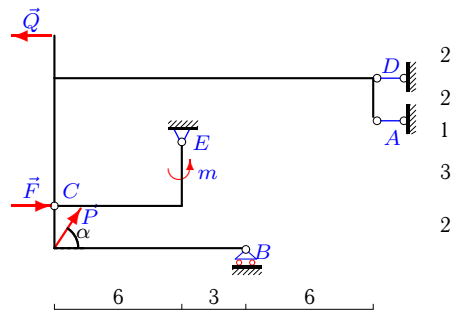
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$P = 3$ кН, $Q = 1$ кН, $F = 7$ кН,
 $m = 5$ кНм, $\alpha = 60^\circ$.

Задача 16.4.

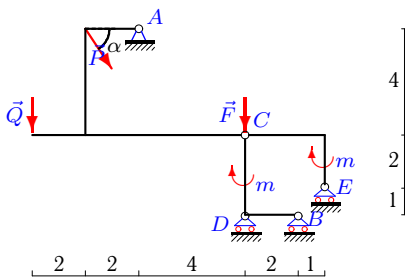
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$P = 2$ кН, $Q = 1$ кН, $F = 6$ кН,
 $m = 4$ кНм, $\alpha = 60^\circ$.

Задача 16.5.

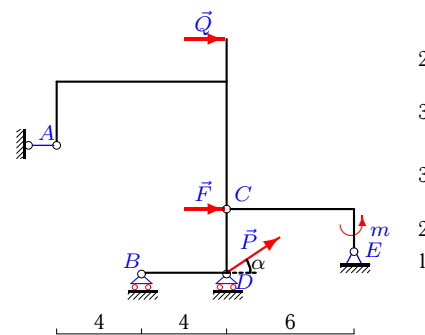
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$P = 4$ кН, $Q = 3$ кН, $F = 9$ кН,
 $m = 6$ кНм, $\alpha = 60^\circ$.

Задача 16.6.

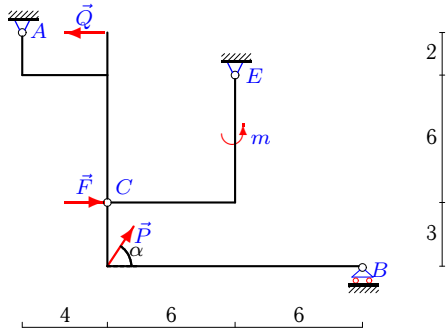
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$P = 3$ кН, $Q = 2$ кН, $F = 4$ кН,
 $m = 5$ кНм, $\alpha = 30^\circ$.

Задача 16.7.

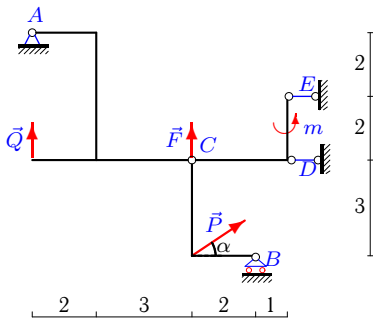
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$P = 5 \text{ кН}$, $Q = 2 \text{ кН}$, $F = 2 \text{ кН}$,
 $m = 4 \text{ кНм}$, $\alpha = 60^\circ$.

Задача 16.9.

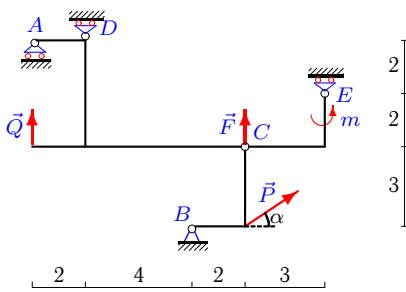
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$P = 6 \text{ кН}$, $Q = 9 \text{ кН}$, $F = 7 \text{ кН}$,
 $m = 4 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.11.

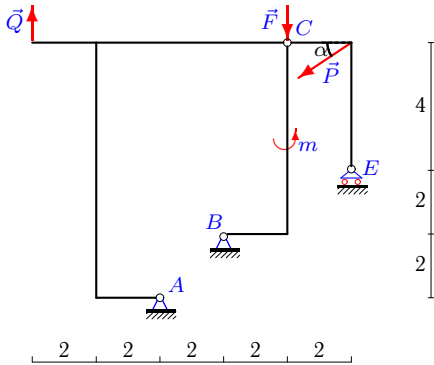
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$P = 2 \text{ кН}$, $Q = 8 \text{ кН}$, $F = 8 \text{ кН}$,
 $m = 3 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.13.

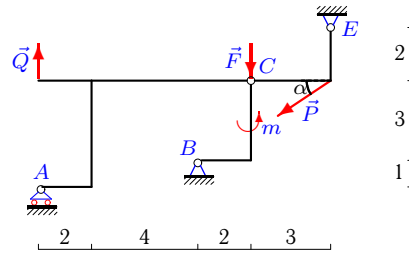
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$P = 1 \text{ кН}$, $Q = 6 \text{ кН}$, $F = 3 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.8.

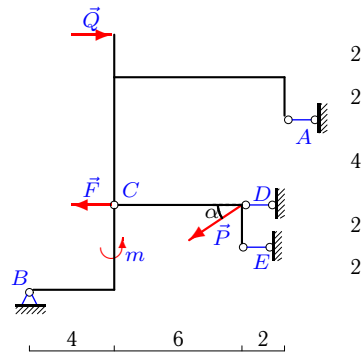
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$P = 4 \text{ кН}$, $Q = 4 \text{ кН}$, $F = 1 \text{ кН}$,
 $m = 3 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.10.

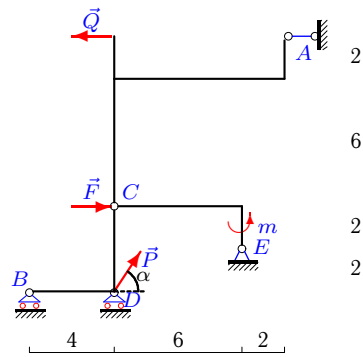
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$P = 8 \text{ кН}$, $Q = 7 \text{ кН}$, $F = 5 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.12.

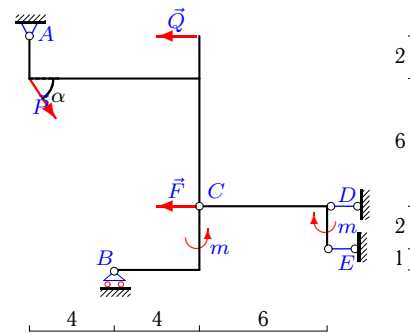
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$P = 4 \text{ кН}$, $Q = 8 \text{ кН}$, $F = 4 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 60^\circ$.

Задача 16.14.

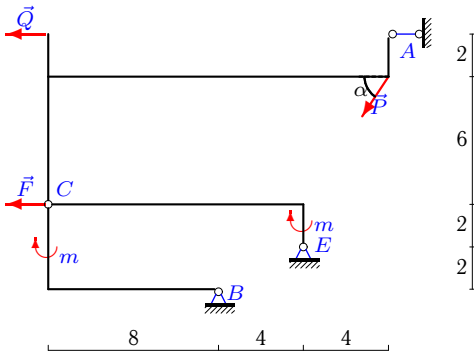
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$P = 7 \text{ кН}$, $Q = 2 \text{ кН}$, $F = 7 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 60^\circ$.

Задача 16.15.

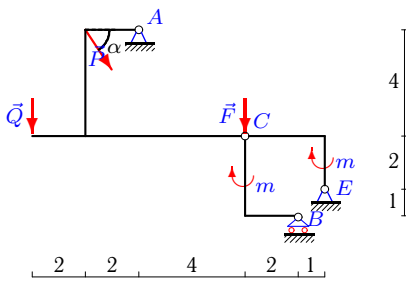
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$P = 8 \text{ кН}, Q = 3 \text{ кН}, F = 1 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.17.

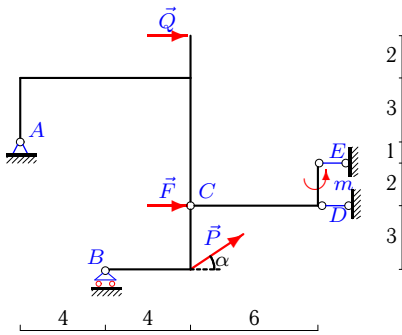
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$P = 1 \text{ кН}, Q = 7 \text{ кН}, F = 2 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.19.

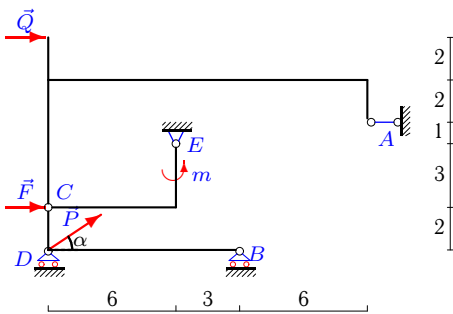
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$P = 8 \text{ кН}, Q = 8 \text{ кН}, F = 7 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.21.

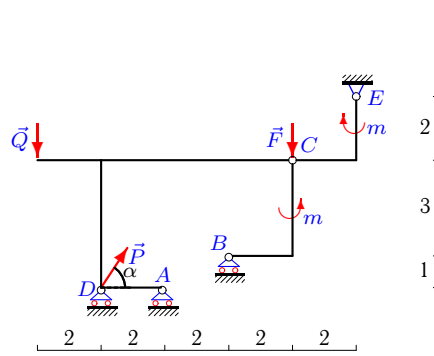
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$P = 8 \text{ кН}, Q = 7 \text{ кН}, F = 4 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.16.

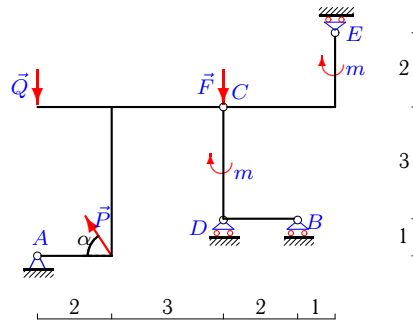
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$P = 4 \text{ кН}, Q = 4 \text{ кН}, F = 6 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.18.

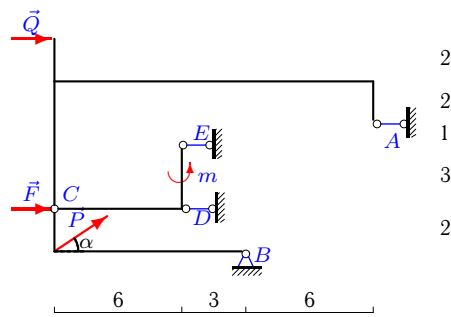
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$P = 4 \text{ кН}, Q = 8 \text{ кН}, F = 9 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.20.

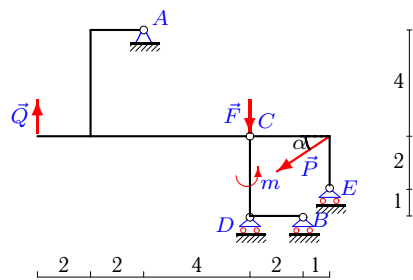
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$P = 5 \text{ кН}, Q = 2 \text{ кН}, F = 5 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.22.

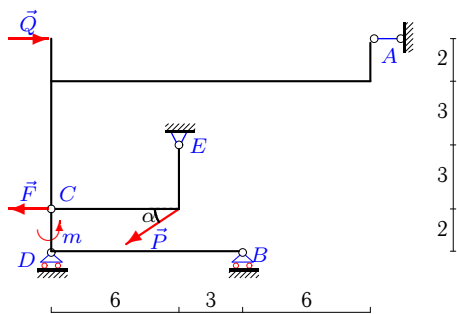
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$P = 5 \text{ кН}, Q = 8 \text{ кН}, F = 9 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.23.

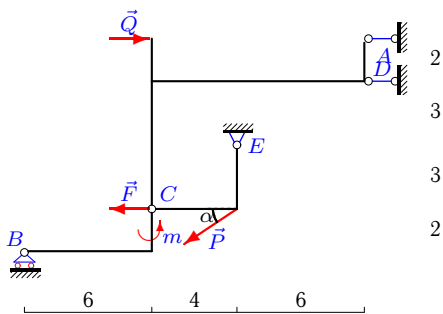
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$P = 1 \text{ кН}, Q = 1 \text{ кН}, F = 4 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.24.

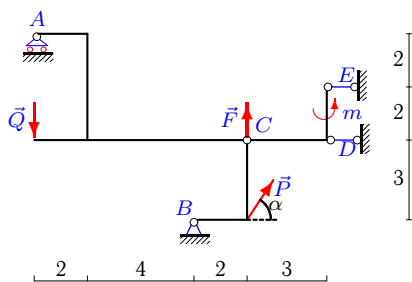
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$P = 1 \text{ кН}, Q = 7 \text{ кН}, F = 6 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.25.

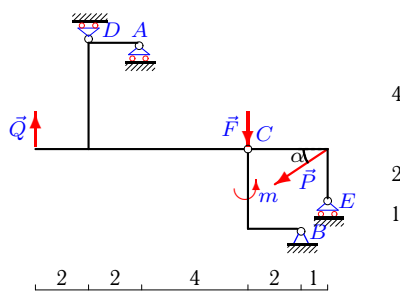
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$P = 6 \text{ кН}, Q = 1 \text{ кН}, F = 5 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.26.

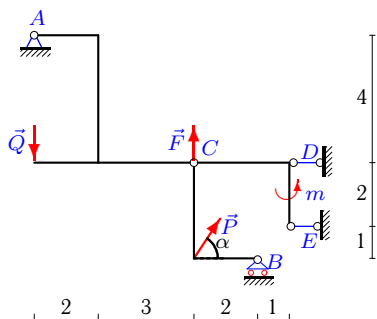
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$P = 4 \text{ кН}, Q = 6 \text{ кН}, F = 8 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.27.

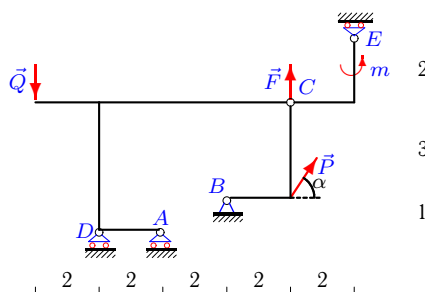
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$P = 3 \text{ кН}, Q = 1 \text{ кН}, F = 7 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.28.

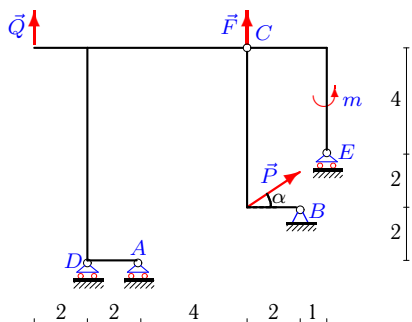
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$P = 5 \text{ кН}, Q = 1 \text{ кН}, F = 8 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.29.

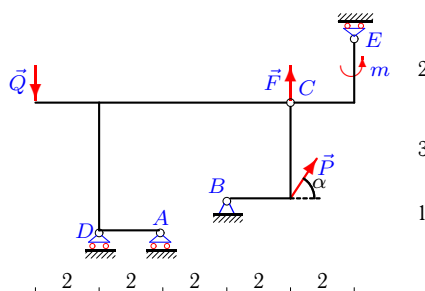
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$P = 8 \text{ кН}, Q = 1 \text{ кН}, F = 8 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.30.

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$P = 2 \text{ кН}, Q = 5 \text{ кН}, F = 8 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 60^\circ.$

Составная конструкция 3 тел

№	X_A	Y_A	X_B	Y_B	X_E	Y_E	X_D	Y_D
1	16.772	-1.096	—	2.625	-21.272	-7.590	—	—
2	—	-6.000	-3.732	-3.000	1.500	—	0.500	—
3	0.875	1.348	—	1.250	2.500	—	6.125	—
4	-16.941	—	—	-0.222	-1.686	-1.509	12.627	—
5	-2.000	11.196	—	3.000	—	2.000	—	-0.732
6	-5.333	—	—	1.948	-3.264	0.254	—	-3.703
7	1.512	0.974	—	-0.625	-4.012	-4.679	—	—
8	—	-4.000	-3.371	-3.556	6.835	6.556	—	—
9	2.757	-11.205	—	-7.794	2.000	—	-9.953	—
10	-14.000	—	2.750	4.000	12.000	—	4.178	—
11	—	16.000	-1.732	0.000	—	-1.000	—	-32.000
12	8.000	—	—	2.000	-6.000	1.166	—	-6.630
13	-3.901	-19.803	4.767	16.803	—	0.500	—	—
14	0.625	4.812	—	1.250	2.500	—	2.375	—
15	-7.856	—	-24.962	13.231	40.819	-6.303	—	—
16	—	7.000	—	1.500	-2.000	-0.500	—	-1.464
17	30.799	-16.000	—	3.000	-31.299	22.866	—	—
18	2.000	5.921	—	2.000	—	1.333	—	4.281
19	3.189	-9.196	—	5.196	1.500	—	-26.617	—
20	-4.000	—	6.919	-2.500	1.333	—	-15.583	—
21	-14.000	—	—	-1.539	-3.928	-2.630	—	0.170
22	4.330	-20.330	—	-3.000	—	2.500	—	24.330
23	-1.000	—	—	-0.444	4.866	2.933	—	-1.988
24	-29.598	—	—	0.500	-0.666	0.000	30.130	—
25	—	1.000	-9.797	-10.196	1.500	—	5.297	—
26	—	54.588	3.464	-8.196	—	2.000	—	-44.392
27	9.185	-6.348	—	-2.250	-3.000	—	-7.685	—
28	—	-33.490	-2.500	0.000	—	-1.500	—	23.660
29	—	-29.000	-6.928	-0.000	—	-2.000	—	18.000
30	—	-29.696	-1.000	0.000	—	-1.500	—	26.464