

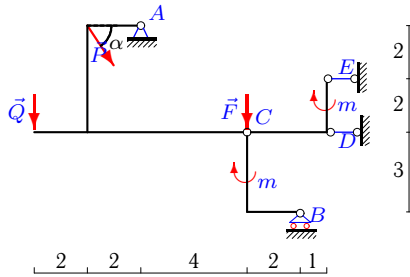
Составная конструкция 3 тел

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.

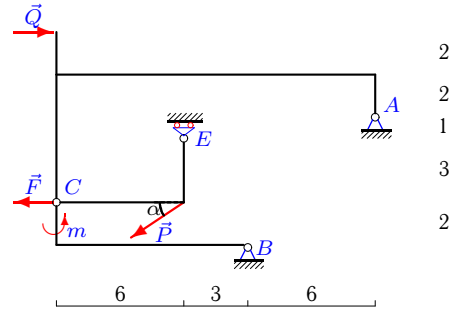
9



$P = 9$ кН, $Q = 7$ кН, $F = 7$ кН,
 $m = 4$ кНМ, $\alpha = 60^\circ$.

Задача 16.2.

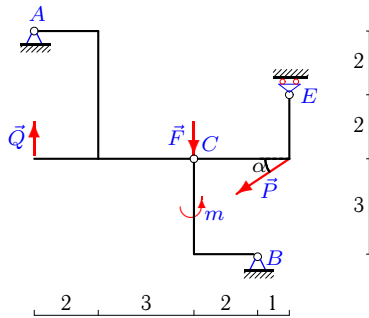
9



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

Задача 16.3.

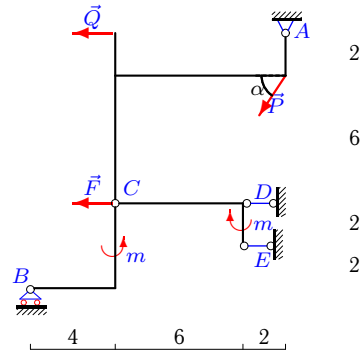
9



$P = 1$ кН, $Q = 7$ кН, $F = 3$ кН,
 $m = 4$ кНМ, $\alpha = 30^\circ$.

Задача 16.4.

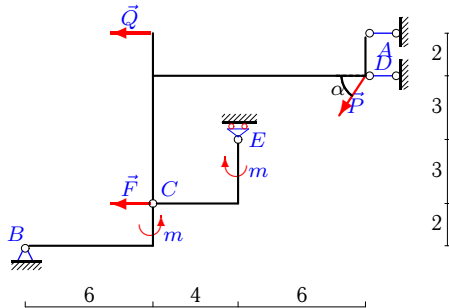
9



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

Задача 16.5.

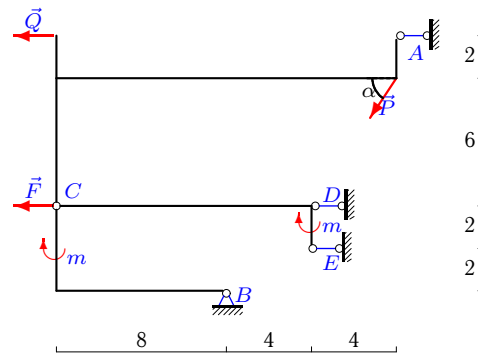
9



$P = 1$ кН, $Q = 2$ кН, $F = 8$ кН,
 $m = 3$ кНМ, $\alpha = 60^\circ$.

Задача 16.6.

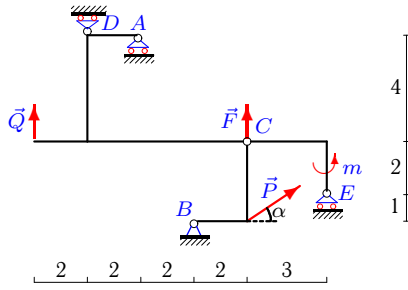
9



$P = 7$ кН, $Q = 5$ кН, $F = 5$ кН,
 $m = 6$ кНМ, $\alpha = 60^\circ$.

Задача 16.7.

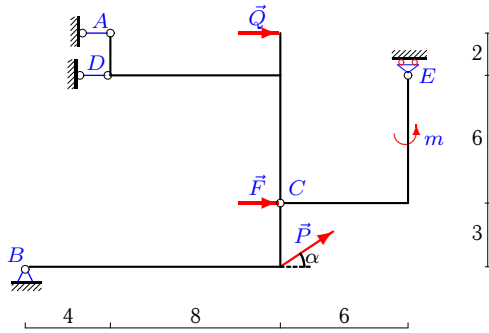
9



$P = 3 \text{ кН}$, $Q = 5 \text{ кН}$, $F = 8 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.9.

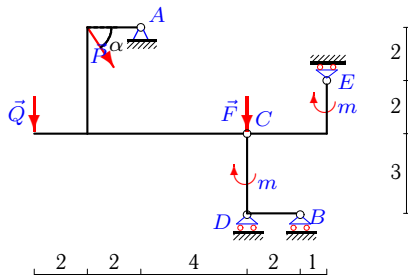
9



$P = 6 \text{ кН}$, $Q = 4 \text{ кН}$, $F = 8 \text{ кН}$,
 $m = 3 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.11.

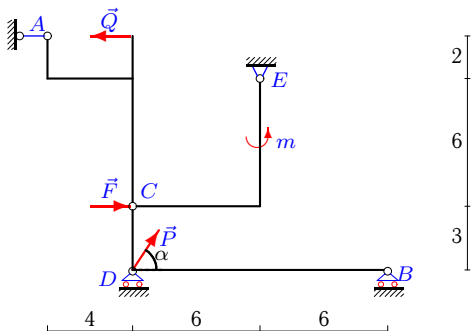
9



$P = 7 \text{ кН}$, $Q = 9 \text{ кН}$, $F = 9 \text{ кН}$,
 $m = 4 \text{ кНм}$, $\alpha = 60^\circ$.

Задача 16.13.

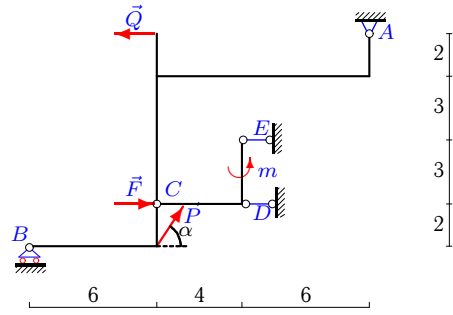
9



$P = 9 \text{ кН}$, $Q = 2 \text{ кН}$, $F = 4 \text{ кН}$,
 $m = 4 \text{ кНм}$, $\alpha = 60^\circ$.

Задача 16.8.

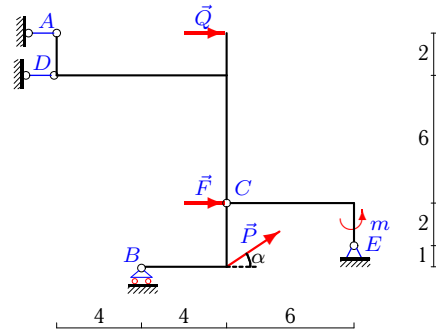
9



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

Задача 16.10.

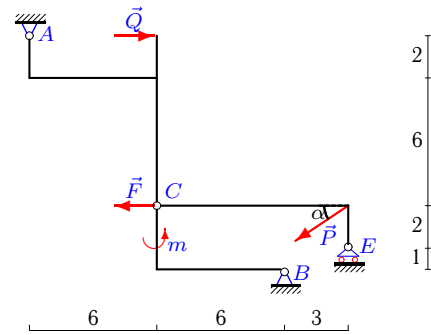
9



$P = 4 \text{ кН}$, $Q = 9 \text{ кН}$, $F = 6 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.12.

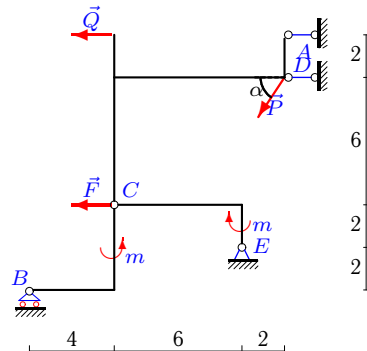
9



$P = 4 \text{ кН}$, $Q = 3 \text{ кН}$, $F = 3 \text{ кН}$,
 $m = 6 \text{ кНм}$, $\alpha = 30^\circ$.

Задача 16.14.

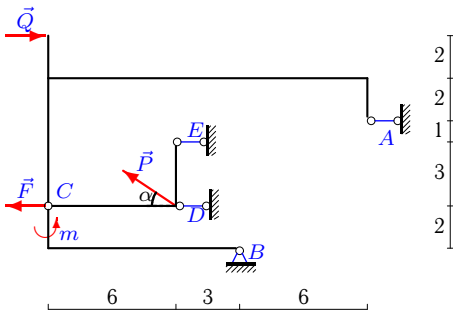
9



$P = 1 \text{ кН}$, $Q = 2 \text{ кН}$, $F = 6 \text{ кН}$,
 $m = 5 \text{ кНм}$, $\alpha = 60^\circ$.

Задача 16.15.

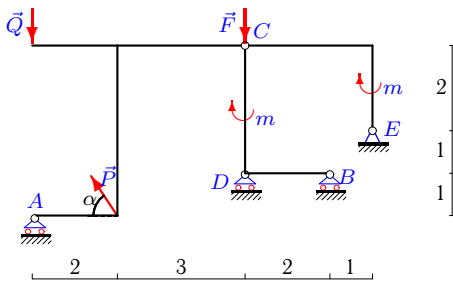
9



$P = 1 \text{ кН}, Q = 3 \text{ кН}, F = 5 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.17.

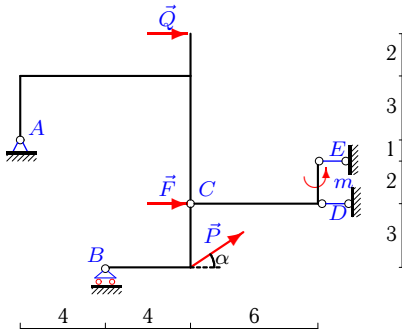
9



$P = 6 \text{ кН}, Q = 8 \text{ кН}, F = 4 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.19.

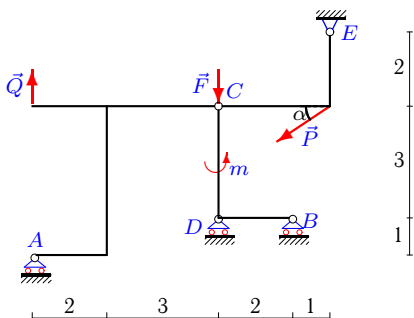
9



$P = 5 \text{ кН}, Q = 5 \text{ кН}, F = 7 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.21.

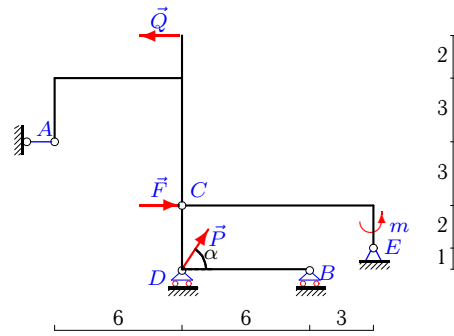
9



$P = 8 \text{ кН}, Q = 3 \text{ кН}, F = 4 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.16.

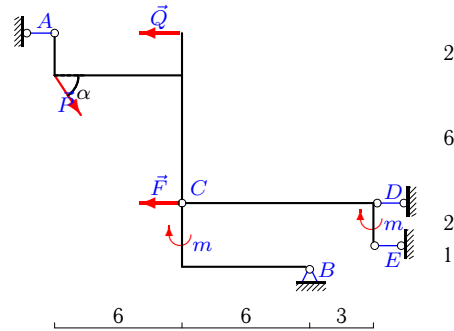
9



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

Задача 16.18.

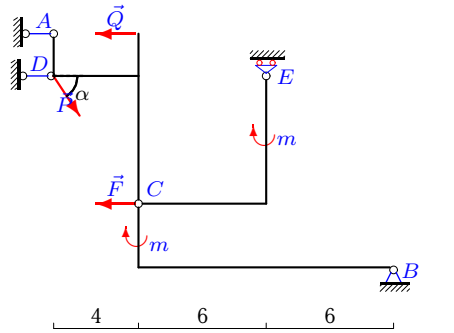
9



$P = 3 \text{ кН}, Q = 8 \text{ кН}, F = 5 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.20.

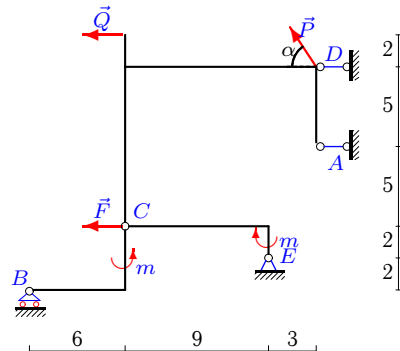
9



$P = 5 \text{ кН}, Q = 2 \text{ кН}, F = 8 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.22.

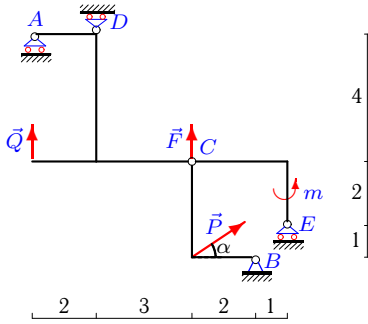
9



$P = 9 \text{ кН}, Q = 5 \text{ кН}, F = 6 \text{ кН},$
 $m = 5 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.23.

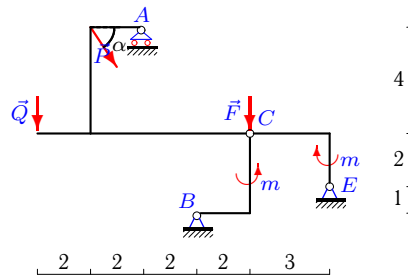
9



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

Задача 16.24.

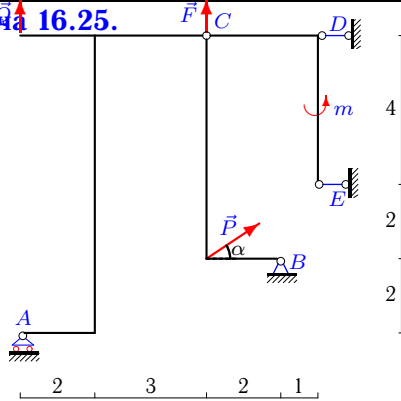
9



$P = 2 \text{ кН}, Q = 1 \text{ кН}, F = 1 \text{ кН},$
 $m = 5 \text{ кНм}, \alpha = 60^\circ.$

Задача 16.25.

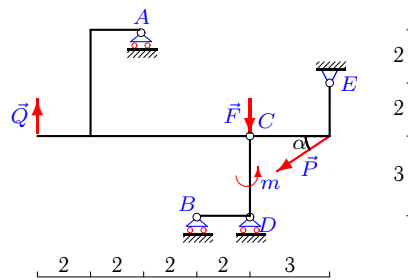
9



$P = 6 \text{ кН}, Q = 2 \text{ кН}, F = 5 \text{ кН},$
 $m = 6 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.26.

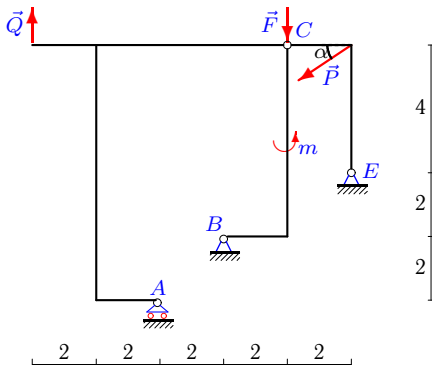
9



$P = 3 \text{ кН}, Q = 8 \text{ кН}, F = 4 \text{ кН},$
 $m = 3 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.27.

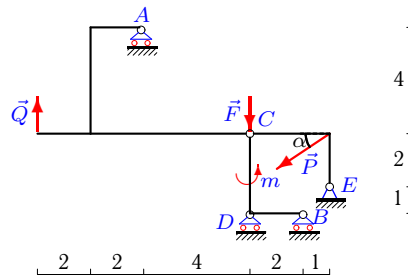
9



$P = 7 \text{ кН}, Q = 5 \text{ кН}, F = 1 \text{ кН},$
 $m = 5 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.28.

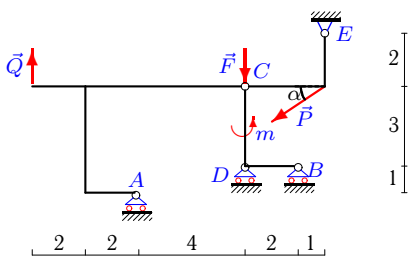
9



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

Задача 16.29.

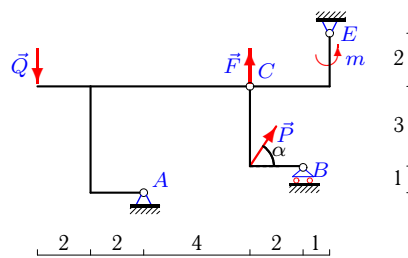
9



$P = 7 \text{ кН}, Q = 2 \text{ кН}, F = 4 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 30^\circ.$

Задача 16.30.

9



$P = 4 \text{ кН}, Q = 9 \text{ кН}, F = 2 \text{ кН},$
 $m = 4 \text{ кНм}, \alpha = 60^\circ.$

Составная конструкция 3 тел

№	X_A	Y_A	X_B	Y_B	X_E	Y_E	X_D	Y_D
1	1.397	19.794	—	2.000	-2.000	—	-3.897	—
2	-0.030	1.058	2.762	-1.058	—	1.000	—	—
3	8.998	-14.198	-8.132	10.198	—	0.500	—	—
4	6.875	1.348	—	1.250	2.500	—	6.125	—
5	-29.785	—	-1.151	0.116	—	0.750	41.437	—
6	-4.499	—	-10.624	6.062	3.000	—	25.623	—
7	—	-18.500	-2.598	0.000	—	-1.666	—	5.666
8	-6.036	-7.228	—	1.166	1.000	—	-2.463	—
9	-10.000	—	-15.196	-2.500	—	-0.500	8.000	—
10	53.275	—	—	2.598	11.294	-4.598	-83.033	—
11	-3.500	27.093	—	2.000	—	1.333	—	-6.364
12	-8.078	6.771	11.542	-6.771	—	2.000	—	—
13	2.000	—	—	-1.125	-8.500	-9.166	—	2.497
14	-8.508	—	—	1.250	3.651	-0.384	13.356	—
15	-6.000	—	0.250	-0.500	1.000	—	7.616	—
16	16.000	—	—	-1.000	-16.000	2.888	—	-5.353
17	—	2.482	—	3.000	3.000	0.000	—	1.321
18	8.823	—	-3.196	2.598	3.000	—	2.872	—
19	1.993	-5.747	—	3.247	1.500	—	-19.823	—
20	-53.301	—	-13.320	3.663	—	0.666	74.121	—
21	—	-3.000	—	-2.000	6.928	8.618	—	1.381
22	-91.354	—	—	0.833	41.324	-8.627	65.530	—
23	—	14.000	-6.928	-0.000	—	-2.000	—	-25.000
24	—	3.598	-2.168	-0.753	1.168	0.887	—	—
25	—	-2.000	-2.529	-8.000	-1.500	—	-1.166	—
26	—	-16.000	—	1.500	2.598	3.232	—	8.767
27	—	-10.000	3.124	11.874	2.937	-2.374	—	—
28	—	-12.000	—	-3.000	6.928	-0.618	—	17.618
29	—	-4.000	—	-2.000	6.062	7.541	—	3.958
30	-26.392	-8.392	—	-3.000	24.392	14.928	—	—