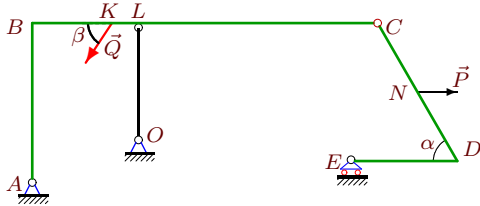


Составная конструкция

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

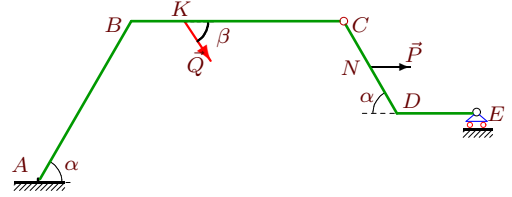
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2002.– 384 с. (с.67.)

Задача 7.1.



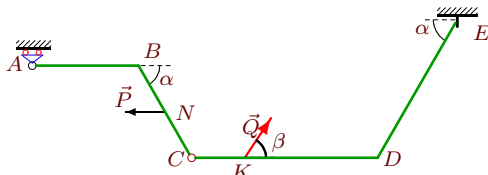
$P = 8 \text{ кН}, Q = 8 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 6 \text{ м}, BC = 13 \text{ м}, CD = 6 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, BK = 3 \text{ м}, LC = 9 \text{ м}.$

Задача 7.2.



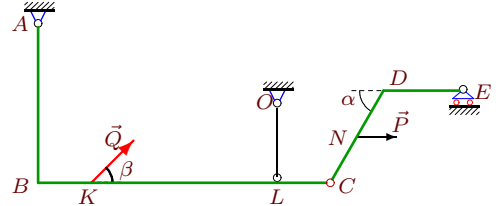
$P = 9 \text{ кН}, Q = 6 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 7 \text{ м}, BC = 8 \text{ м}, CD = 4 \text{ м},$
 $DE = 3 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}.$

Задача 7.3.



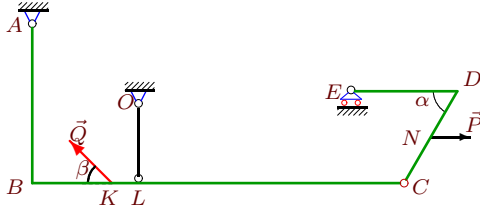
$P = 9 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 4 \text{ м}, BC = 4 \text{ м}, CD = 7 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}.$

Задача 7.4.



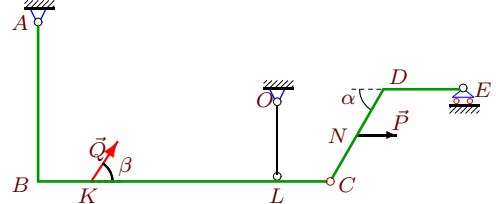
$P = 5 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 6 \text{ м}, BC = 11 \text{ м}, CD = 4 \text{ м},$
 $DE = 3 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}, LC = 2 \text{ м}.$

Задача 7.5.



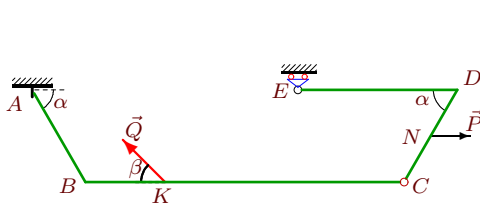
$P = 6 \text{ кН}, Q = 8 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 6 \text{ м}, BC = 14 \text{ м}, CD = 4 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, BK = 3 \text{ м}, LC = 10 \text{ м}.$

Задача 7.6.



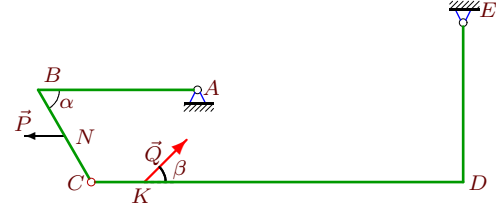
$P = 7 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 6 \text{ м}, BC = 11 \text{ м}, CD = 4 \text{ м},$
 $DE = 3 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}, LC = 2 \text{ м}.$

Задача 7.7.



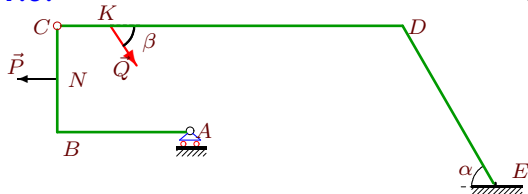
$P = 6 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 12 \text{ м}, CD = 4 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, BK = 3 \text{ м}.$

Задача 7.8.



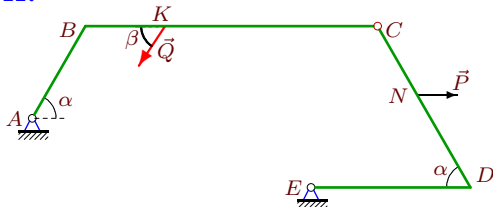
$P = 5 \text{ кН}, Q = 2 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 6 \text{ м}, BC = 4 \text{ м}, CD = 14 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}.$

Задача 7.9.



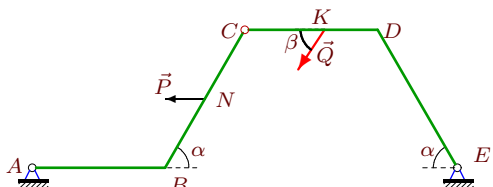
$P = 8 \text{ кН}, Q = 8 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 5 \text{ м}, BC = 4 \text{ м}, CD = 13 \text{ м},$
 $DE = 7 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}.$

Задача 7.11.



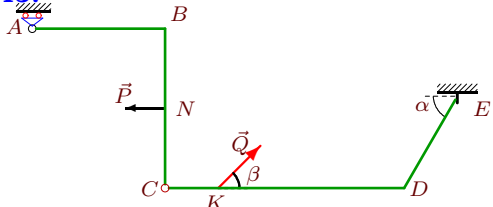
$P = 6 \text{ кН}, Q = 6 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 4 \text{ м}, BC = 11 \text{ м}, CD = 7 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, BK = 3 \text{ м}.$

Задача 7.13.



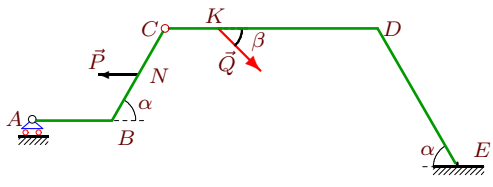
$P = 6 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 5 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, CK = 3 \text{ м}.$

Задача 7.15.



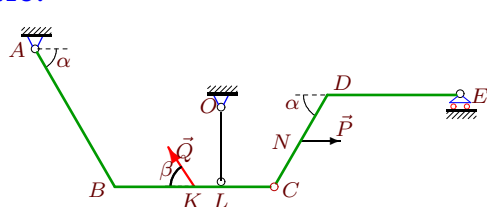
$P = 6 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 9 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.17.



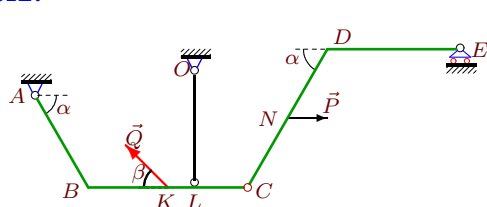
$P = 6 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 3 \text{ м}, BC = 4 \text{ м}, CD = 8 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}.$

Задача 7.10.



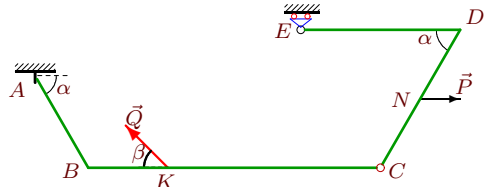
$P = 7 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 6 \text{ м}, BC = 6 \text{ м}, CD = 4 \text{ м},$
 $DE = 5 \text{ м}, CN = 2 \text{ м}, BK = 3 \text{ м}, LC = 2 \text{ м}.$

Задача 7.12.



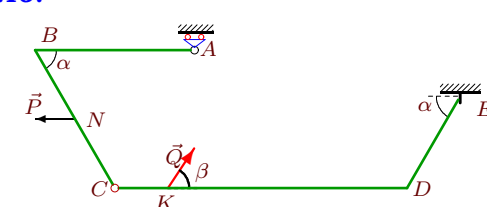
$P = 6 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 6 \text{ м}, CD = 6 \text{ м},$
 $DE = 5 \text{ м}, CN = 3 \text{ м}, BK = 3 \text{ м}, LC = 2 \text{ м}.$

Задача 7.14.



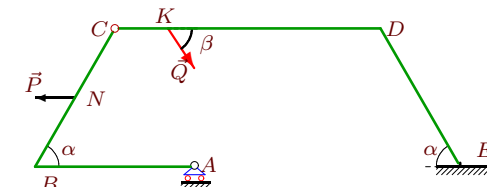
$P = 7 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 11 \text{ м}, CD = 6 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, BK = 3 \text{ м}.$

Задача 7.16.



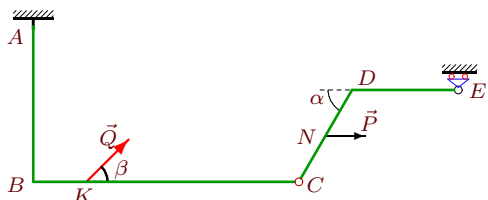
$P = 8 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 6 \text{ м}, BC = 6 \text{ м}, CD = 11 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.18.



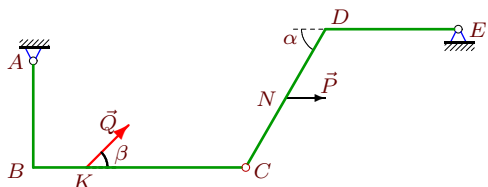
$P = 9 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 6 \text{ м}, BC = 6 \text{ м}, CD = 10 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.19.



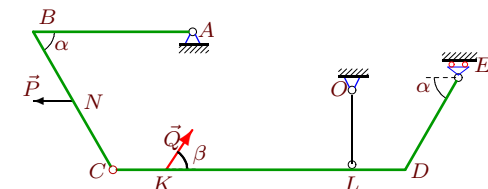
$P = 6 \text{ кН}, Q = 8 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 6 \text{ м}, BC = 10 \text{ м}, CD = 4 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}.$

Задача 7.21.



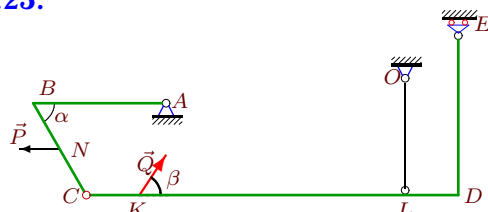
$P = 4 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 8 \text{ м}, CD = 6 \text{ м},$
 $DE = 5 \text{ м}, CN = 3 \text{ м}, BK = 2 \text{ м}.$

Задача 7.23.



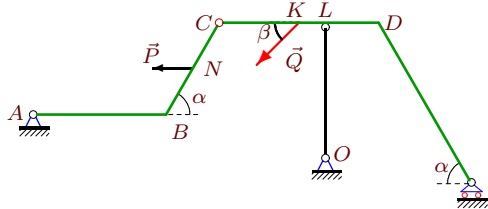
$P = 7 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 6 \text{ м}, BC = 6 \text{ м}, CD = 11 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}, LD = 2 \text{ м}$

Задача 7.25.



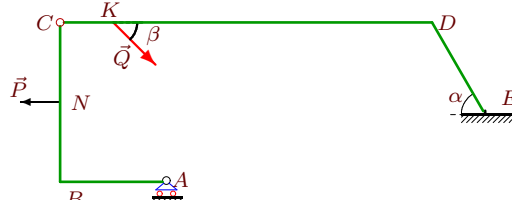
$P = 8 \text{ кН}, Q = 2 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 5 \text{ м}, BC = 4 \text{ м}, CD = 14 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}, LD = 2 \text{ м}$

Задача 7.27.



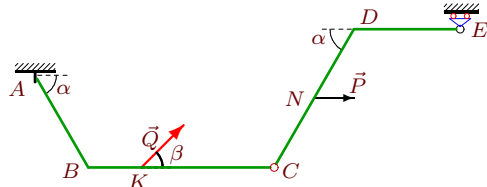
$P = 5 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 5 \text{ м}, BC = 4 \text{ м}, CD = 6 \text{ м},$
 $DE = 7 \text{ м}, CN = 2 \text{ м}, CK = 3 \text{ м}, LD = 2 \text{ м}$

Задача 7.20.



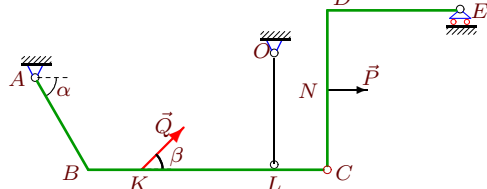
$P = 6 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 6 \text{ м}, CD = 14 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.22.



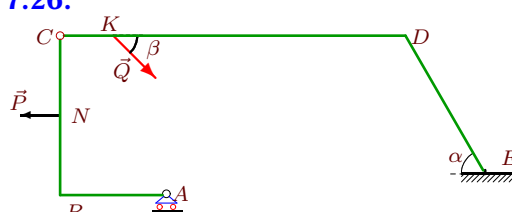
$P = 7 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 7 \text{ м}, CD = 6 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, BK = 2 \text{ м}.$

Задача 7.24.



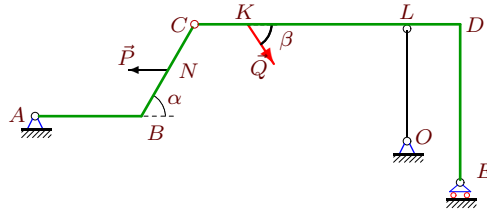
$P = 5 \text{ кН}, Q = 1 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 9 \text{ м}, CD = 6 \text{ м},$
 $DE = 5 \text{ м}, CN = 3 \text{ м}, BK = 2 \text{ м}, LC = 2 \text{ м}.$

Задача 7.26.



$P = 6 \text{ кН}, Q = 8 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 6 \text{ м}, CD = 13 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

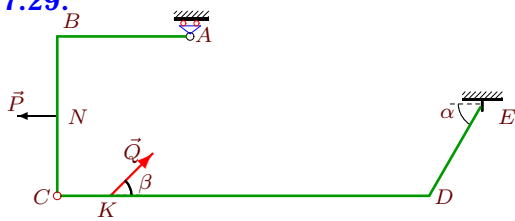
Задача 7.28.



$P = 8 \text{ кН}, Q = 2 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 4 \text{ м}, BC = 4 \text{ м}, CD = 10 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}, LD = 2 \text{ м}$

Задача 7.29.

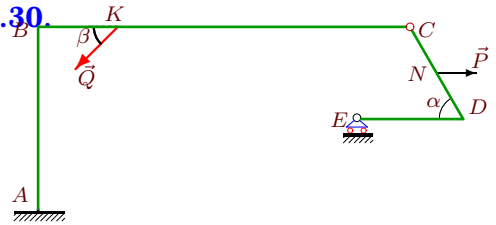
9



$P = 6$ кН, $Q = 8$ кН, $\alpha = 60^\circ$, $\beta = 30^\circ$,
 $AB = 5$ м, $BC = 6$ м, $CD = 14$ м,
 $DE = 4$ м, $CN = 3$ м, $CK = 2$ м.

Задача 7.30.

9



$P = 7$ кН, $Q = 7$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 7$ м, $BC = 14$ м, $CD = 4$ м,
 $DE = 4$ м, $CN = 2$ м, $BK = 3$ м.

Составная конструкция

	X_A	Y_A	X_E	Y_E	S_{OL}	M	X_C	Y_C
1	-5.929	39.803	—	20.785	-52.860		8.000	20.785
2	-10.553	8.913	—	-3.118	—	131.703	9.000	-3.118
3	—	2.598	7.965	-6.462	—	98.276	9.000	-2.598
4	-11.062	5.037	—	1.732	-10.270		5.000	1.732
5	-0.343	-13.890	—	-5.196	13.429		6.000	-5.196
6	-10.500	2.824	—	2.425	-11.311		7.000	2.425
7	-3.402	1.098	—	-2.598	—	17.088	6.000	-2.598
8	-1.335	-3.321	4.921	1.907	—		6.335	3.321
9	—	3.200	4.000	3.728	—	-71.908	8.000	-3.200
10	-4.500	3.217	—	1.732	-9.279		7.000	1.732
11	-1.407	2.823	-1.593	2.374	—		4.407	2.374
12	-2.464	1.483	—	1.949	-6.967		6.000	1.949
13	7.167	2.706	0.833	0.758	—		-1.167	-2.706
14	-4.172	3.234	—	-6.062	—	50.215	7.000	-6.062
15	—	3.600	-0.062	-7.100	—	70.885	6.000	-3.600
16	—	-6.928	6.500	4.330	—	-38.971	8.000	6.928
17	—	-2.078	1.670	4.578	—	-54.040	6.000	2.078
18	—	7.794	8.224	-4.896	—	26.719	9.000	-7.794
19	-12.928	-5.732	—	1.732	—	-102.890	6.000	1.732
20	—	4.500	-0.062	-1.000	—	23.215	6.000	-4.500
21	-3.794	-0.728	-6.268	-2.772	—		-2.268	-2.772
22	-10.536	-6.134	—	2.598	—	-74.021	7.000	2.598
23	5.500	3.464	—	12.341	-18.403		1.500	-3.464
24	-5.866	2.647	—	3.000	-6.147		5.000	3.000
25	7.482	4.021	—	33.786	-39.739		0.518	-4.021
26	—	4.500	-0.928	-0.500	—	20.823	6.000	-4.500
27	8.464	2.951	—	1.783	-2.734		-3.464	-2.951
28	7.482	2.011	—	2.247	-2.325		0.518	-2.011
29	—	-3.600	-0.928	-0.400	—	-4.815	6.000	3.600
30	-2.050	-1.112	—	6.062	—	-55.669	7.000	6.062