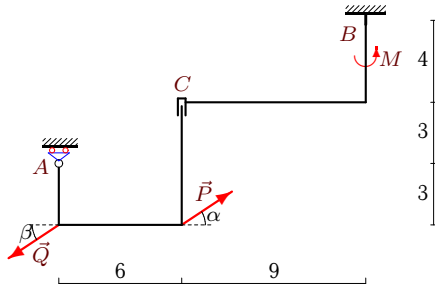


Составная прямоугольная рама

Рама состоит из двух частей, соединенных шарниром или скользящей заделкой. Размеры даны в метрах. Найти реакции опор.

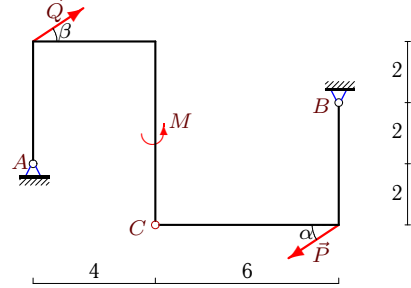
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2008.– 384 с. (с.54.)

Задача 8.1.



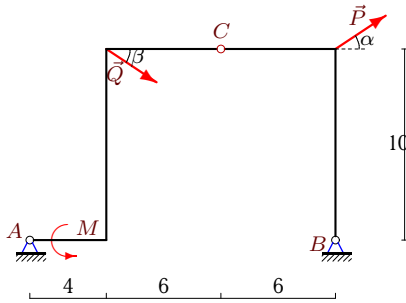
$P=7\text{кН}$, $Q=2\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=1\text{кНм}$.

Задача 8.2.



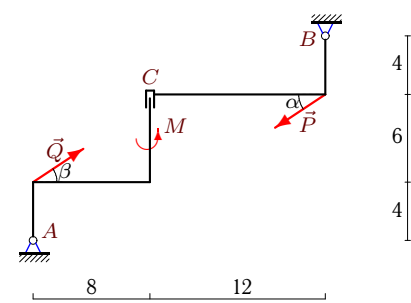
$P=4\text{кН}$, $Q=3\text{кН}$, $\alpha=30^\circ$, $\beta=45^\circ$, $M=4\text{кНм}$.

Задача 8.3.



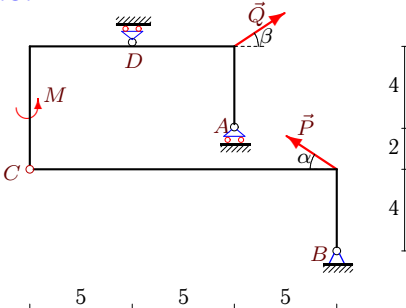
$P=3\text{кН}$, $Q=1\text{кН}$, $\alpha=30^\circ$, $\beta=60^\circ$, $M=3\text{кНм}$.

Задача 8.4.



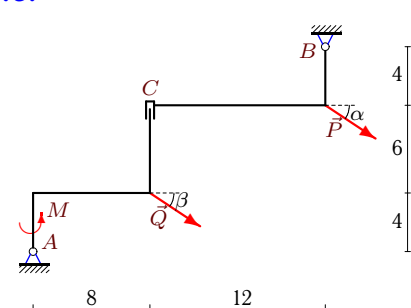
$P=5\text{кН}$, $Q=5\text{кН}$, $\alpha=30^\circ$, $\beta=60^\circ$, $M=1\text{кНм}$.

Задача 8.5.



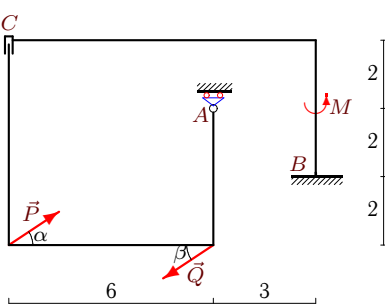
$P=6\text{кН}$, $Q=4\text{кН}$, $\alpha=60^\circ$, $\beta=45^\circ$, $M=8\text{кНм}$.

Задача 8.6.



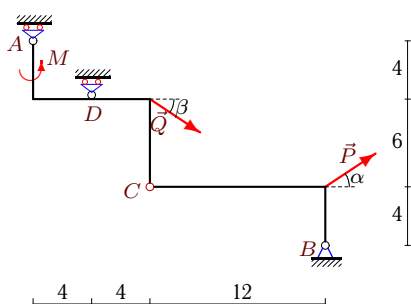
$P=4\text{кН}$, $Q=3\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=4\text{кНм}$.

Задача 8.7.



$P=7\text{кН}$, $Q=1\text{кН}$, $\alpha=30^\circ$, $\beta=45^\circ$, $M=3\text{кНм}$.

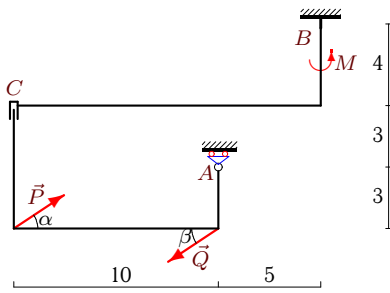
Задача 8.8.



$P=5\text{кН}$, $Q=3\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=4\text{кНм}$.

Задача 8.9.

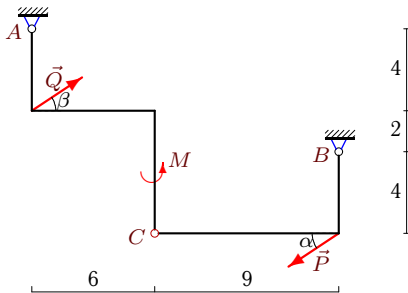
5



$P=7\text{кН}$, $Q=6\text{кН}$, $\alpha=30^\circ$, $\beta=45^\circ$, $M=6\text{ кНм}$.

Задача 8.11.

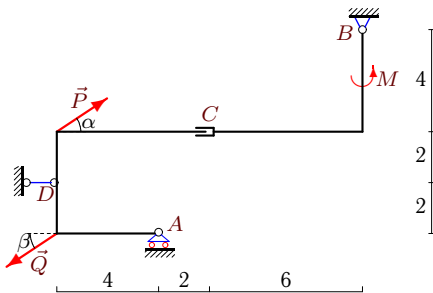
5



$P=4\text{кН}$, $Q=8\text{кН}$, $\alpha=60^\circ$, $\beta=45^\circ$, $M=6\text{ кНм}$.

Задача 8.13.

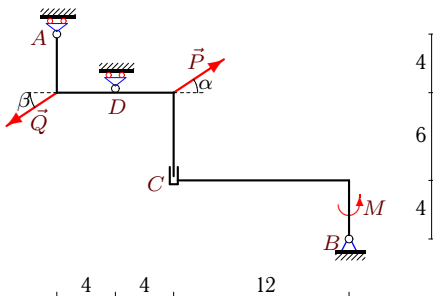
5



$P=5\text{кН}$, $Q=7\text{кН}$, $\alpha=30^\circ$, $\beta=60^\circ$, $M=3\text{ кНм}$.

Задача 8.15.

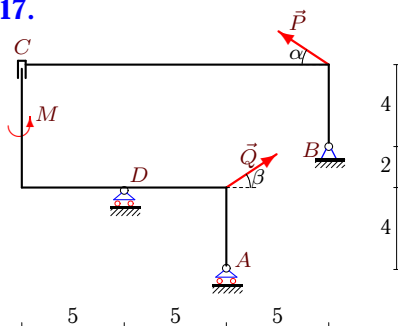
5



$P=5\text{кН}$, $Q=3\text{кН}$, $\alpha=45^\circ$, $\beta=60^\circ$, $M=7\text{ кНм}$.

Задача 8.17.

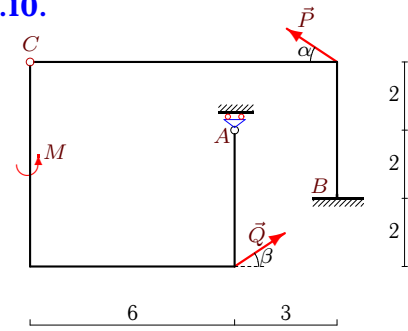
5



$P=7\text{кН}$, $Q=4\text{кН}$, $\alpha=45^\circ$, $\beta=30^\circ$, $M=1\text{ кНм}$.

Задача 8.10.

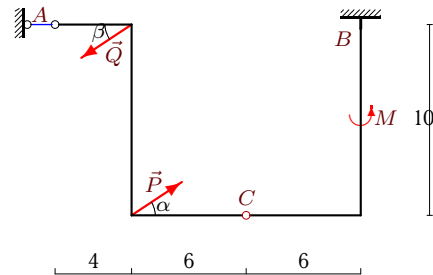
5



$P=8\text{кН}$, $Q=5\text{кН}$, $\alpha=45^\circ$, $\beta=60^\circ$, $M=8\text{ кНм}$.

Задача 8.12.

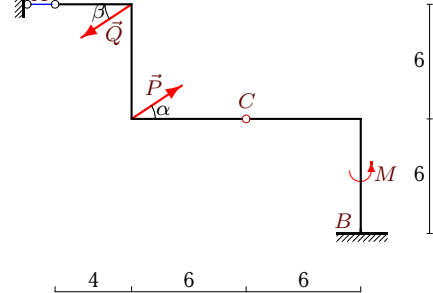
5



$P=6\text{кН}$, $Q=1\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=5\text{ кНм}$.

Задача 8.14.

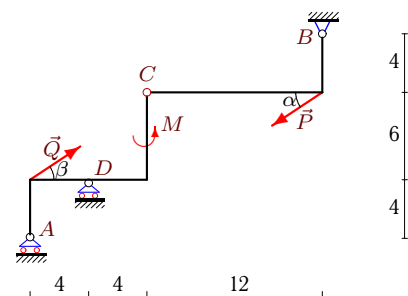
5



$P=6\text{кН}$, $Q=1\text{кН}$, $\alpha=45^\circ$, $\beta=30^\circ$, $M=9\text{ кНм}$.

Задача 8.16.

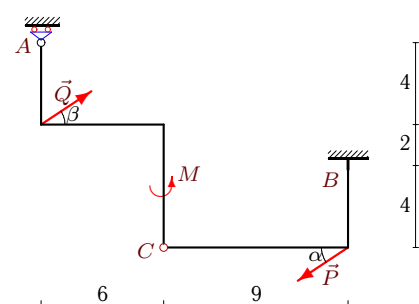
5



$P=6\text{кН}$, $Q=3\text{кН}$, $\alpha=45^\circ$, $\beta=30^\circ$, $M=6\text{ кНм}$.

Задача 8.18.

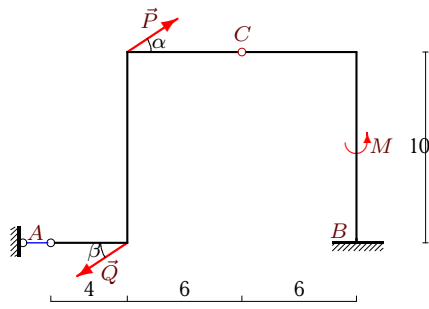
5



$P=8\text{кН}$, $Q=8\text{кН}$, $\alpha=30^\circ$, $\beta=45^\circ$, $M=7\text{ кНм}$.

Задача 8.19.

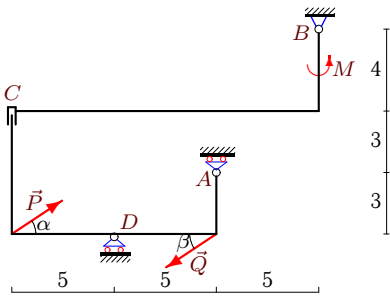
5



$P=6\text{кН}$, $Q=6\text{кН}$, $\alpha=30^\circ$, $\beta=60^\circ$, $M=1\text{ кНм}$.

Задача 8.21.

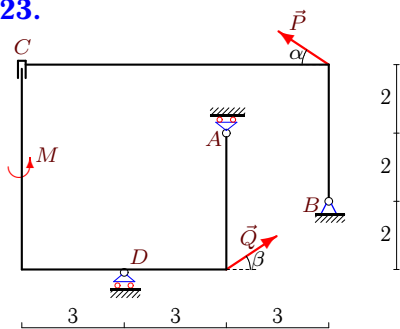
5



$P=5\text{кН}$, $Q=6\text{кН}$, $\alpha=45^\circ$, $\beta=30^\circ$, $M=1\text{ кНм}$.

Задача 8.23.

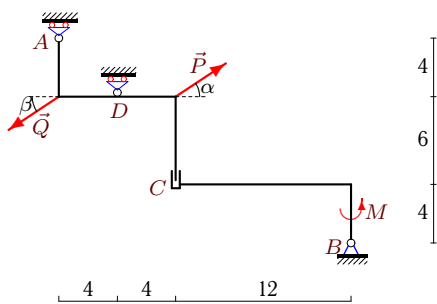
5



$P=7\text{кН}$, $Q=6\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=9\text{ кНм}$.

Задача 8.25.

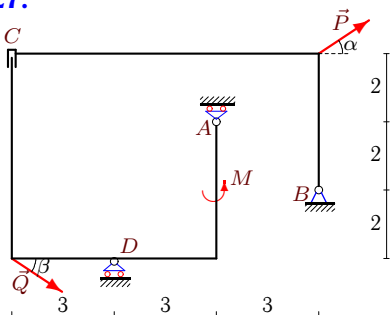
5



$P=5\text{кН}$, $Q=1\text{кН}$, $\alpha=60^\circ$, $\beta=45^\circ$, $M=4\text{ кНм}$.

Задача 8.27.

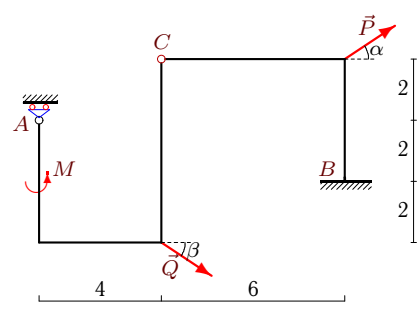
5



$P=6\text{кН}$, $Q=5\text{кН}$, $\alpha=45^\circ$, $\beta=60^\circ$, $M=3\text{ кНм}$.

Задача 8.20.

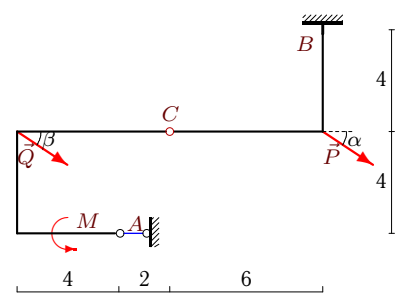
5



$P=7\text{кН}$, $Q=4\text{кН}$, $\alpha=60^\circ$, $\beta=45^\circ$, $M=3\text{ кНм}$.

Задача 8.22.

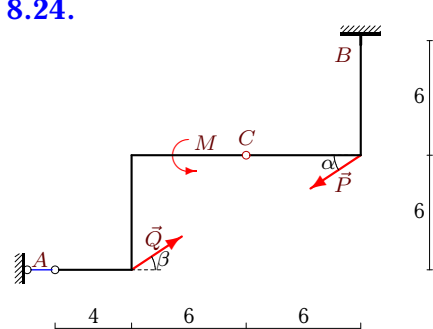
5



$P=7\text{кН}$, $Q=4\text{кН}$, $\alpha=45^\circ$, $\beta=60^\circ$, $M=5\text{ кНм}$.

Задача 8.24.

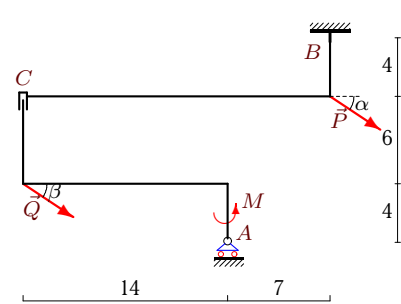
5



$P=8\text{кН}$, $Q=9\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=1\text{ кНм}$.

Задача 8.26.

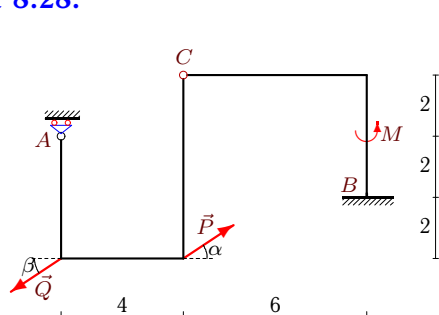
5



$P=8\text{кН}$, $Q=7\text{кН}$, $\alpha=45^\circ$, $\beta=60^\circ$, $M=9\text{ кНм}$.

Задача 8.28.

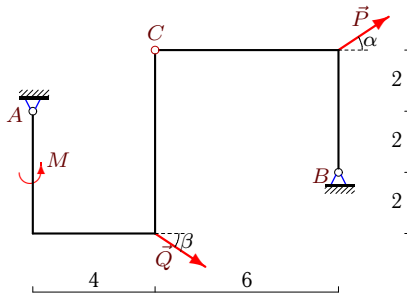
5



$P=6\text{кН}$, $Q=2\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=8\text{ кНм}$.

Задача 8.29.

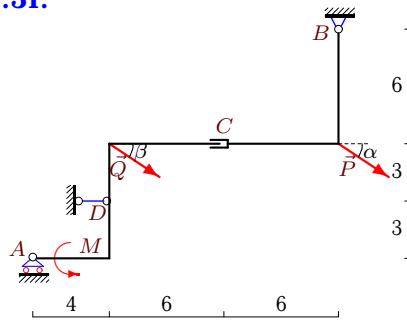
5



$P=3\text{кН}$, $Q=3\text{кН}$, $\alpha=60^\circ$, $\beta=45^\circ$, $M=8\text{кНм}$.

Задача 8.31.

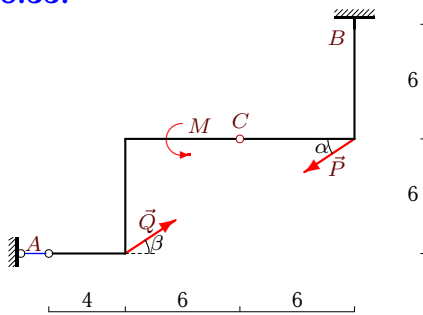
5



$P=6\text{кН}$, $Q=2\text{кН}$, $\alpha=30^\circ$, $\beta=45^\circ$, $M=8\text{кНм}$.

Задача 8.33.

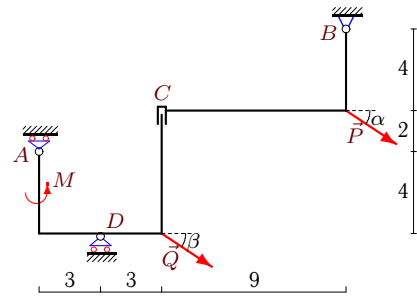
5



$P=8\text{кН}$, $Q=1\text{кН}$, $\alpha=45^\circ$, $\beta=30^\circ$, $M=7\text{кНм}$.

Задача 8.30.

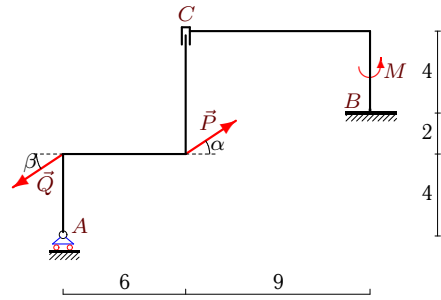
5



$P=6\text{кН}$, $Q=2\text{кН}$, $\alpha=30^\circ$, $\beta=45^\circ$, $M=9\text{кНм}$.

Задача 8.32.

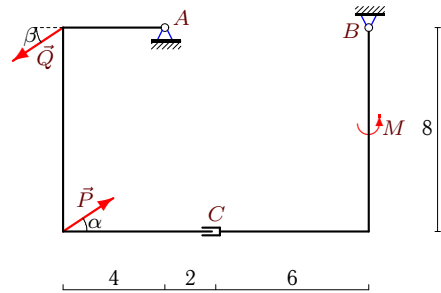
5



$P=7\text{кН}$, $Q=4\text{кН}$, $\alpha=60^\circ$, $\beta=30^\circ$, $M=1\text{кНм}$.

Задача 8.34.

5



$P=3\text{кН}$, $Q=2\text{кН}$, $\alpha=45^\circ$, $\beta=30^\circ$, $M=7\text{кНм}$.

Составная прямоугольная рама

	X_A	Y_A	X_B	Y_B	X_D	Y_D	M_B
1	—	-5.062	-1.768	0.000	—	—	-55.053
2	-1.103	-3.752	2.446	3.630	—	—	—
3	-1.919	-1.099	-1.179	0.465	—	—	—
4	-0.620	-4.330	2.450	2.500	—	—	—
5	—	-1.080	0.172	-5.242	—	-1.703	—
6	-1.856	1.500	-2.742	3.464	—	—	—
7	—	-2.793	-5.355	0.000	—	—	7.290
8	—	-2.698	-5.098	-2.631	—	2.498	—
9	—	0.743	-1.820	0.000	—	—	10.805
10	—	-8.163	3.157	-1.824	—	—	-47.127
11	-2.976	-5.354	-0.681	3.161	—	—	—
12	-1.952	—	-0.182	-4.696	—	—	21.354
13	—	3.761	0.000	-0.199	-0.830	—	—
14	-2.877	—	-0.500	-3.743	—	—	16.456
15	—	2.795	-2.036	0.000	—	-3.732	—
16	—	4.445	1.645	4.791	—	-6.493	—
17	—	-7.545	1.486	-4.950	—	5.545	—
18	—	-10.147	1.271	8.490	—	—	-35.326
19	1.682	—	-3.878	2.196	—	—	24.608
20	—	4.993	-6.328	-8.226	—	—	38.299
21	—	9.657	1.661	0.000	—	-10.192	—
22	-6.446	—	-0.504	8.414	—	—	-22.799
23	—	-14.131	-1.696	-6.062	—	11.131	—
24	-3.461	—	-0.333	2.428	—	—	25.000
25	—	1.555	-1.793	0.000	—	-5.178	—
26	—	6.062	-9.157	5.657	—	—	-151.498
27	—	-1.340	-6.743	-4.243	—	5.670	—
28	—	2.902	-1.268	-7.098	—	—	39.660
29	-4.693	2.836	1.071	-3.312	—	—	—
30	—	13.228	-6.610	3.000	—	-11.814	—
31	—	3.244	-5.196	1.170	-1.414	—	—
32	—	-4.062	-0.036	0.000	—	—	-37.445
33	-1.533	—	6.324	5.157	—	—	40.941
34	-0.389	1.314	0.000	-2.436	—	—	—