

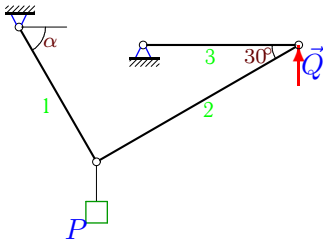
Равновесие цепи из 3 звеньев

Найти угол α в положении равновесия цепи и усилия в стержнях.

Кирсанов М.Н. **Решebник. Теоретическая механика**/Под ред. А. И. Кириллова.- М.:ФИЗМАТЛИТ, 2008.- 384 с. (с.21.)

Задача 2.1.

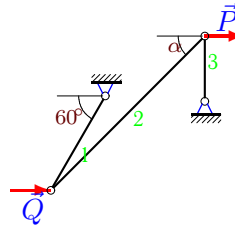
8



$P=11$ кН, $Q=1$ кН.

Задача 2.2.

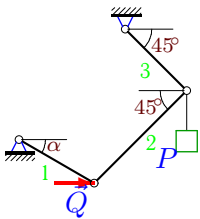
8



$P=11$ кН, $Q=1$ кН.

Задача 2.3.

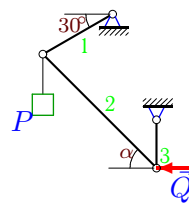
8



$P=2$ кН, $Q=1$ кН.

Задача 2.4.

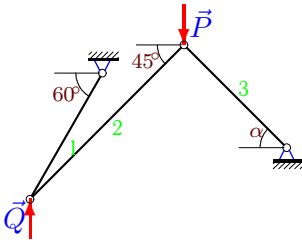
8



$P=20$ кН, $Q=10$ кН.

Задача 2.5.

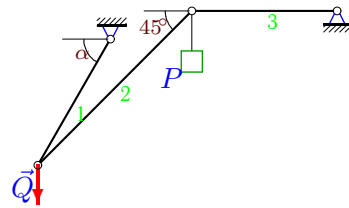
8



$P=9$ кН, $Q=1$ кН.

Задача 2.6.

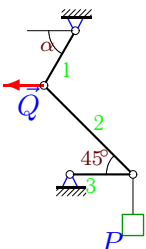
8



$P=15$ кН, $Q=10$ кН.

Задача 2.7.

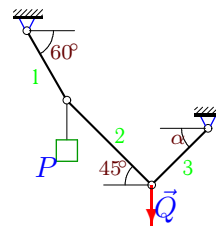
8



$P=30$ кН, $Q=50$ кН.

Задача 2.8.

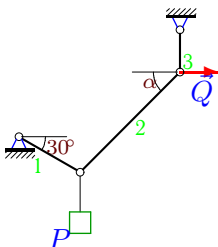
8



$P=33$ кН, $Q=90$ кН.

Задача 2.9.

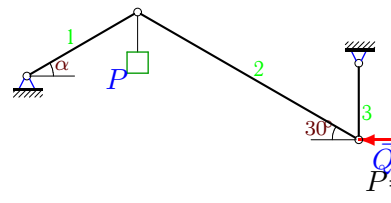
8



$P=28$ кН, $Q=20$ кН.

Задача 2.10.

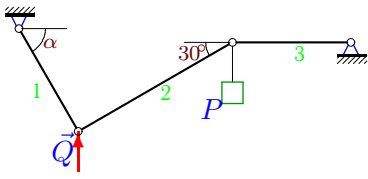
8



$P=16$ кН, $Q=10$ кН.

Задача 2.11.

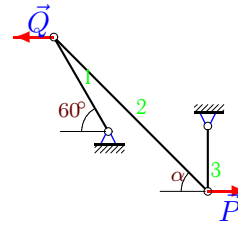
8



$P=4$ кН, $Q=20$ кН.

Задача 2.12.

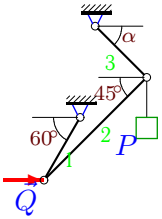
8



$P=25$ кН, $Q=10$ кН.

Задача 2.13.

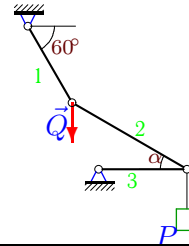
8



$P=17$ кН, $Q=1$ кН.

Задача 2.14.

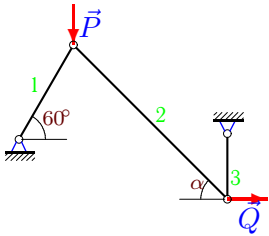
8



$P=23$ кН, $Q=50$ кН.

Задача 2.15.

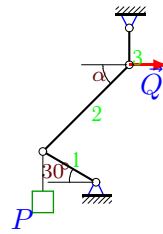
8



$P=5$ кН, $Q=1$ кН.

Задача 2.16.

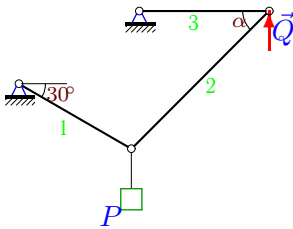
8



$P=19$ кН, $Q=10$ кН.

Задача 2.17.

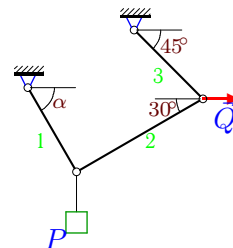
8



$P=2$ кН, $Q=1$ кН.

Задача 2.18.

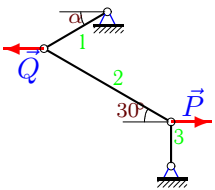
8



$P=3$ кН, $Q=1$ кН.

Задача 2.19.

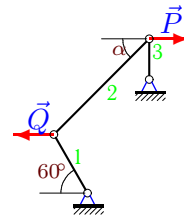
8



$P=18$ кН, $Q=40$ кН.

Задача 2.20.

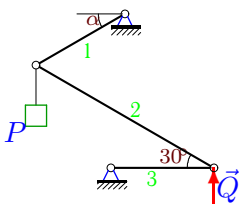
8



$P=15$ кН, $Q=20$ кН.

Задача 2.21.

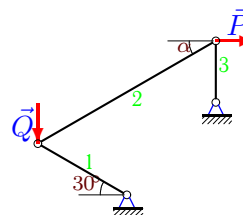
8



$P=5$ кН, $Q=1$ кН.

Задача 2.22.

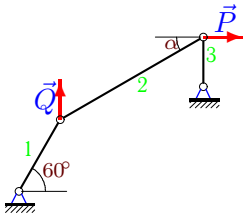
8



$P=26$ кН, $Q=30$ кН.

Задача 2.23.

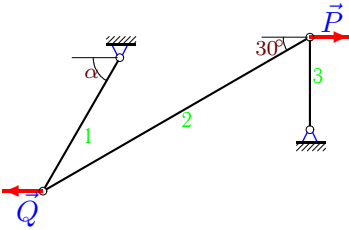
8



$P=32 \text{ кН}, Q=40 \text{ кН}.$

Задача 2.25.

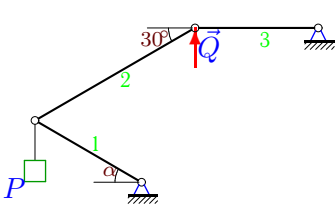
8



$P=22 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.27.

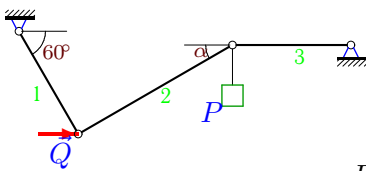
8



$P=5 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.29.

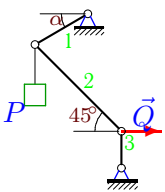
8



$P=29 \text{ кН}, Q=70 \text{ кН}.$

Задача 2.31.

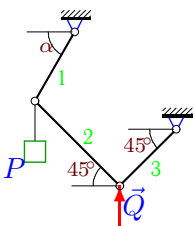
8



$P=2 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.33.

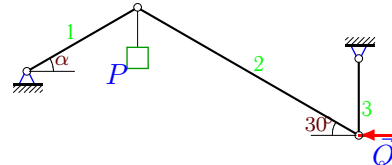
8



$P=17 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.24.

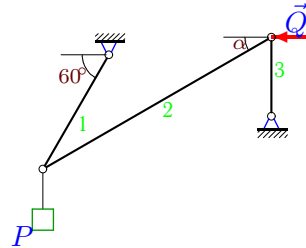
8



$P=26 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.26.

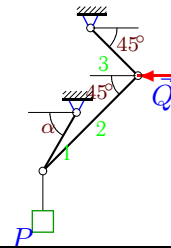
8



$P=29 \text{ кН}, Q=30 \text{ кН}.$

Задача 2.28.

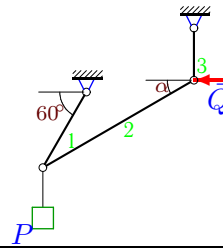
8



$P=8 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.30.

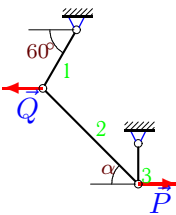
8



$P=24 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.32.

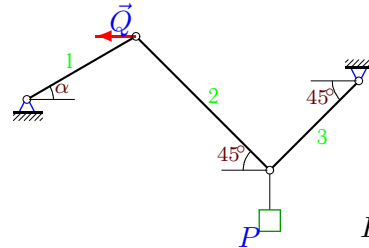
8



$P=7 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.34.

8



$P=27 \text{ кН}, Q=40 \text{ кН}.$

Равновесие цепи из 3 звеньев

	$\operatorname{tg}\alpha$	α	S_1	S_2	S_3
1	5.774	1.399	10.149	2.000	-1.732
2	1.890	1.084	-24.000	23.516	-20.785
3	2961149930576.000	1.571	-1.000	-1.414	1.414
4	1.423	0.958	11.547	-17.389	14.226
5	7.588	1.440	-2.732	1.932	10.456
6	1.667	1.030	29.155	-21.213	-15.000
7	1.500	0.983	36.056	42.426	-30.000
8	0.997	0.784	90.158	63.751	63.640
9	0.823	0.688	23.094	25.898	16.453
10	1.023	0.797	-14.303	-11.547	5.774
11	2.309	1.162	-17.436	-8.000	-6.928
12	1.039	0.805	-30.000	36.056	-25.981
13	6.185	1.411	2.732	-3.346	14.824
14	0.546	0.500	84.293	48.014	-42.147
15	6.732	1.423	2.000	6.806	6.732
16	1.323	0.923	-11.547	16.581	13.226
17	0.577	0.524	2.000	2.000	-1.732
18	4.155	1.335	2.709	0.732	0.518
19	0.472	0.441	24.331	20.785	10.392
20	0.577	0.524	10.000	17.321	-8.660
21	2.309	1.162	4.359	-2.000	1.732
22	0.576	0.523	-30.022	30.011	-14.989
23	0.482	0.449	64.000	35.524	-15.426
24	0.723	0.626	-24.676	-23.094	11.547
25	1.058	0.814	-17.474	25.403	-12.702
26	0.765	0.653	60.000	-37.779	22.962
27	2.309	1.162	-4.359	2.000	1.732
28	1.800	1.064	20.591	-14.142	-14.142
29	0.545	0.499	33.486	-60.641	-53.257
30	0.532	0.489	40.000	-22.655	-10.641
31	3.000	1.249	-3.162	1.414	1.000
32	0.742	0.639	6.000	8.718	-5.196
33	2.400	1.176	13.000	-7.071	-7.071
34	0.509	0.471	-29.741	19.092	19.092