

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, 2002.– 384 с. (с.21.)

Задача 2.1. 2

$P=19$ кН, $Q=10$ кН.

Задача 2.2. 2

$P=14$ кН, $Q=10$ кН.

Задача 2.3. 2

$P=31$ кН, $Q=20$ кН.

Задача 2.4. 2

$P=14$ кН, $Q=10$ кН.

Задача 2.5. 2

$P=13$ кН, $Q=10$ кН.

Задача 2.6. 2

$P=15$ кН, $Q=10$ кН.

Задача 2.7. 2

$P=10$ кН, $Q=1$ кН.

Задача 2.8. 2

$P=14$ кН, $Q=10$ кН.

Задача 2.9. 2

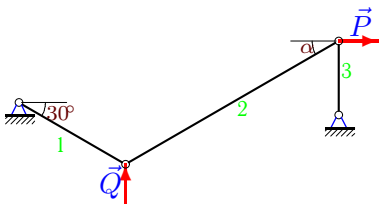
$P=22$ кН, $Q=20$ кН.

Задача 2.10. 2

$P=20$ кН, $Q=30$ кН.

Задача 2.11.

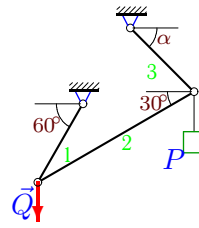
2



$P=2 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.12.

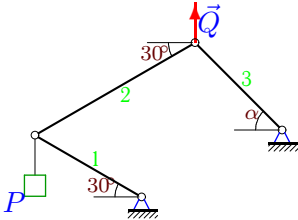
2



$P=15 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.13.

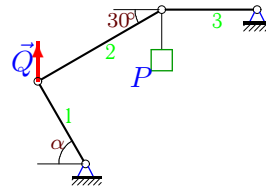
2



$P=10 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.14.

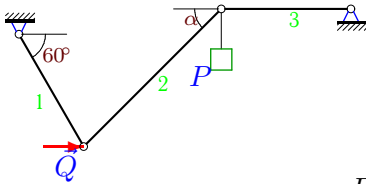
2



$P=28 \text{ кН}, Q=110 \text{ кН}.$

Задача 2.15.

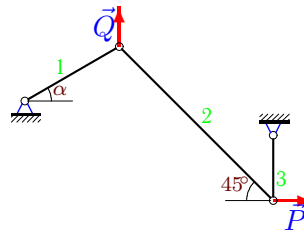
2



$P=20 \text{ кН}, Q=30 \text{ кН}.$

Задача 2.16.

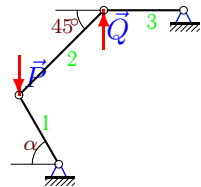
2



$P=24 \text{ кН}, Q=40 \text{ кН}.$

Задача 2.17.

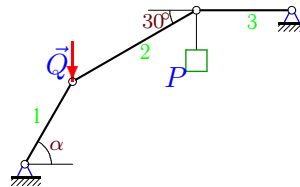
2



$P=5 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.18.

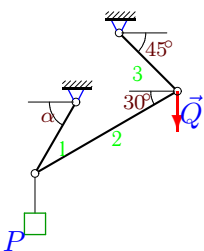
2



$P=9 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.19.

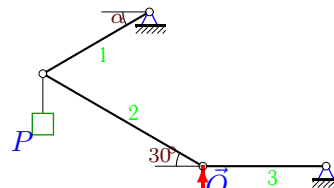
2



$P=15 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.20.

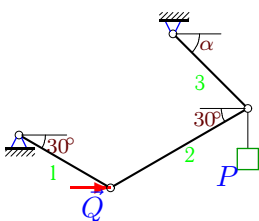
2



$P=28 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.21.

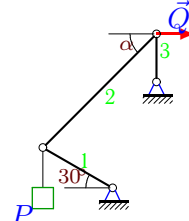
2



$P=18 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.22.

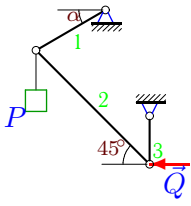
2



$P=12 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.23.

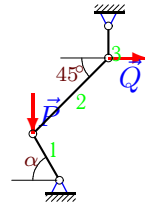
2



$P=19 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.24.

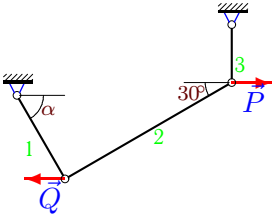
2



$P=21 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.25.

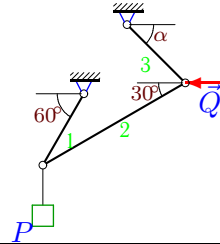
2



$P=30 \text{ кН}, Q=40 \text{ кН}.$

Задача 2.26.

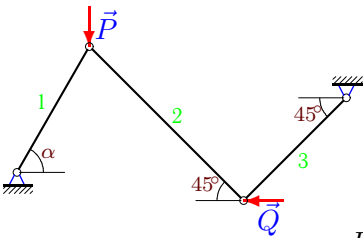
2



$P=30 \text{ кН}, Q=40 \text{ кН}.$

Задача 2.27.

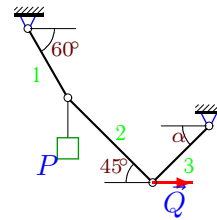
2



$P=32 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.28.

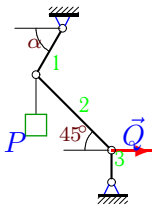
2



$P=22 \text{ кН}, Q=60 \text{ кН}.$

Задача 2.29.

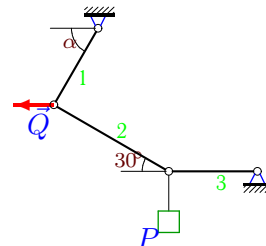
2



$P=7 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.30.

2



$P=22 \text{ кН}, Q=50 \text{ кН}.$

Равновесие цепи из 3 звеньев

	$\operatorname{tg}\alpha$	α	S_1	S_2	S_3
1	0.438	0.413	-13.909	-9.835	7.592
2	0.823	0.688	12.949	-11.547	5.774
3	1.445	0.965	-14.641	17.932	22.280
4	0.332	0.321	-20.000	-10.537	3.321
5	1.925	1.092	-6.000	11.269	-5.196
6	11.196	1.482	5.512	-10.981	-13.449
7	0.909	0.738	-14.866	14.142	-10.000
8	4.330	1.344	4.619	-10.263	2.309
9	1.909	1.088	-47.413	31.113	-22.000
10	1.629	1.020	36.353	-21.962	-26.897
11	1.077	0.823	2.309	2.940	2.155
12	1.155	0.857	17.321	-10.000	13.229
13	0.577	0.524	-10.000	10.000	10.000
14	1.691	1.037	95.268	-56.000	-48.497
15	1.084	0.826	23.094	-27.212	-18.453
16	0.667	0.588	28.844	33.941	-24.000
17	4.000	1.326	-4.123	1.414	1.000
18	1.860	1.078	-32.924	-18.000	-15.588
19	1.760	1.054	25.671	-14.641	17.932
20	1.039	0.805	24.980	-20.000	-17.321
21	1.223	0.885	11.547	-11.547	15.795
22	0.623	0.557	-11.547	11.780	-6.226
23	0.900	0.733	13.454	-14.142	10.000
24	1.100	0.833	-14.866	14.142	10.000
25	1.732	1.047	-20.000	34.641	17.321
26	1.070	0.819	51.962	-30.000	-20.531
27	2.200	1.144	-24.166	-14.142	14.142
28	1.004	0.787	60.105	42.501	-42.426
29	8.000	1.446	-8.062	1.414	1.000
30	1.850	1.075	25.010	44.000	38.105