

Равновесие цепи из 3 звеньев

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

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2002.– 384 с. (с.21.)

Задача 2.1. 1

$P=25$ кН, $Q=20$ кН.

Задача 2.2. 1

$P=4$ кН, $Q=1$ кН.

Задача 2.3. 1

$P=28$ кН, $Q=10$ кН.

Задача 2.4. 1

$P=14$ кН, $Q=30$ кН.

Задача 2.5. 1

$P=21$ кН, $Q=60$ кН.

Задача 2.6. 1

$P=29$ кН, $Q=10$ кН.

Задача 2.7. 1

$P=21$ кН, $Q=30$ кН.

Задача 2.8. 1

$P=25$ кН, $Q=10$ кН.

Задача 2.9. 1

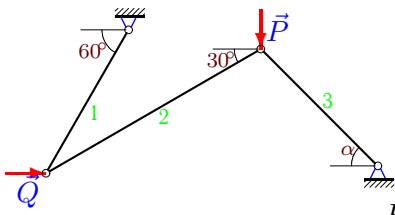
$P=10$ кН, $Q=30$ кН.

Задача 2.10. 1

$P=16$ кН, $Q=10$ кН.

Задача 2.11.

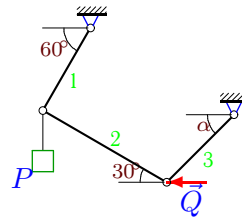
1



$P=17$ кН, $Q=10$ кН.

Задача 2.12.

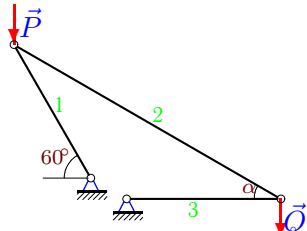
1



$P=23$ кН, $Q=20$ кН.

Задача 2.13.

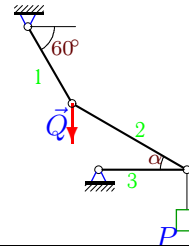
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$P=24$ кН, $Q=10$ кН.

Задача 2.14.

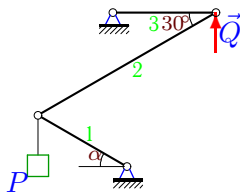
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$P=25$ кН, $Q=50$ кН.

Задача 2.15.

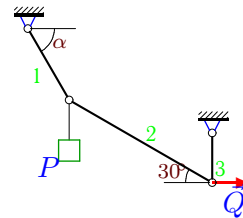
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$P=15$ кН, $Q=10$ кН.

Задача 2.16.

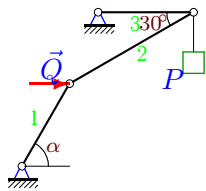
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$P=12$ кН, $Q=10$ кН.

Задача 2.17.

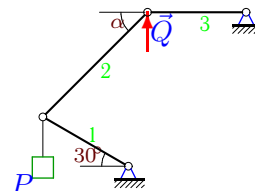
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$P=26$ кН, $Q=30$ кН.

Задача 2.18.

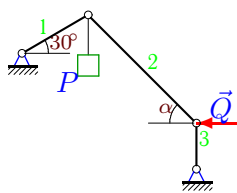
1



$P=19$ кН, $Q=10$ кН.

Задача 2.19.

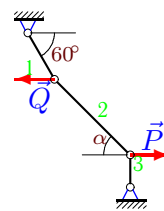
1



$P=18$ кН, $Q=10$ кН.

Задача 2.20.

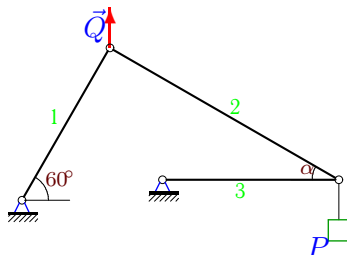
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$P=12$ кН, $Q=10$ кН.

Задача 2.21.

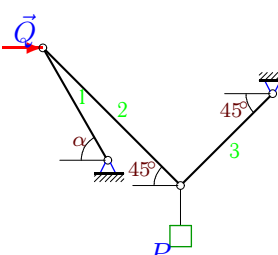
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$P=8$ кН, $Q=30$ кН.

Задача 2.22.

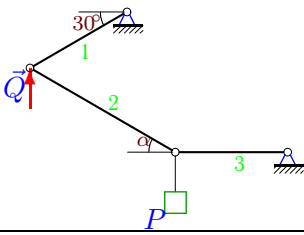
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$P=11$ кН, $Q=1$ кН.

Задача 2.23.

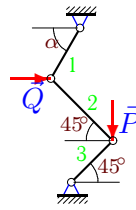
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$P=6$ кН, $Q=10$ кН.

Задача 2.24.

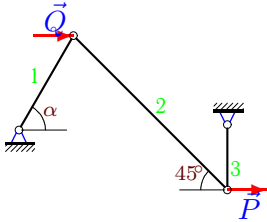
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$P=4$ кН, $Q=1$ кН.

Задача 2.25.

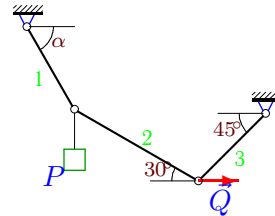
1



$P=1$ кН, $Q=1$ кН.

Задача 2.26.

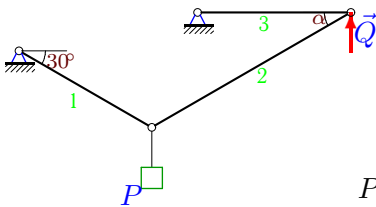
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$P=14$ кН, $Q=20$ кН.

Задача 2.27.

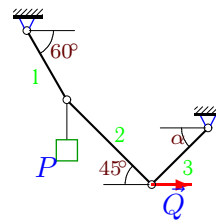
1



$P=21$ кН, $Q=10$ кН.

Задача 2.28.

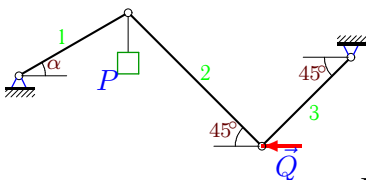
1



$P=26$ кН, $Q=70$ кН.

Задача 2.29.

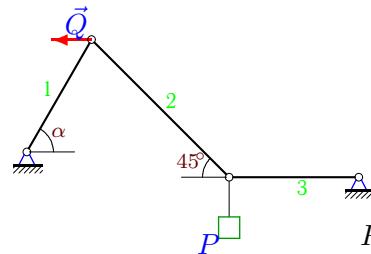
1



$P=17$ кН, $Q=20$ кН.

Задача 2.30.

1



$P=27$ кН, $Q=40$ кН.

Равновесие цепи из 3 звеньев

	$\operatorname{tg}\alpha$	α	S_1	S_2	S_3
1	1.186	0.870	18.301	-12.941	14.193
2	7.309	1.435	-0.732	-0.897	-4.677
3	1.714	1.043	-27.785	-19.799	19.799
4	0.411	0.390	28.000	15.135	5.751
5	1.125	0.844	42.000	31.611	23.627
6	1.097	0.832	25.710	20.000	-17.321
7	1.019	0.795	58.890	42.036	29.445
8	0.866	0.714	-22.913	20.000	-17.321
9	2.000	1.107	-22.361	14.142	10.000
10	1.023	0.797	14.303	-11.547	-5.774
11	0.556	0.507	10.000	-17.321	-17.162
12	0.573	0.520	19.919	-11.500	11.571
13	0.509	0.471	-39.260	22.030	-19.630
14	0.577	0.524	86.603	50.000	-43.301
15	0.289	0.281	-18.028	20.000	-17.321
16	1.777	1.058	20.394	11.547	-5.774
17	1.729	1.047	-30.033	-52.000	45.033
18	0.642	0.570	-18.000	18.520	15.588
19	1.223	0.885	-11.547	-15.795	-12.226
20	0.289	0.281	4.000	12.490	3.464
21	0.630	0.562	25.403	15.011	-12.702
22	0.846	0.702	-8.515	7.778	7.778
23	0.866	0.714	-8.000	9.165	6.928
24	0.667	0.588	-3.606	2.828	-2.828
25	0.500	0.464	2.236	1.414	-1.000
26	1.681	1.034	24.806	14.641	-10.353
27	0.525	0.483	22.000	21.517	-19.053
28	1.030	0.800	71.033	50.228	-49.503
29	0.700	0.611	-12.207	-14.142	14.142
30	2.077	1.122	-29.967	38.184	27.000