

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, 2008.- 384 с. (с.21.)

Задача 2.1. 9

$P=26$ кН, $Q=60$ кН.

Задача 2.2. 9

$P=17$ кН, $Q=20$ кН.

Задача 2.3. 9

$P=11$ кН, $Q=20$ кН.

Задача 2.4. 9

$P=23$ кН, $Q=10$ кН.

Задача 2.5. 9

$P=29$ кН, $Q=80$ кН.

Задача 2.6. 9

$P=13$ кН, $Q=1$ кН.

Задача 2.7. 9

$P=9$ кН, $Q=10$ кН.

Задача 2.8. 9

$P=28$ кН, $Q=20$ кН.

Задача 2.9. 9

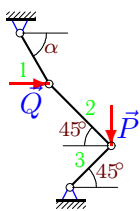
$P=18$ кН, $Q=20$ кН.

Задача 2.10. 9

$P=8$ кН, $Q=10$ кН.

Задача 2.11.

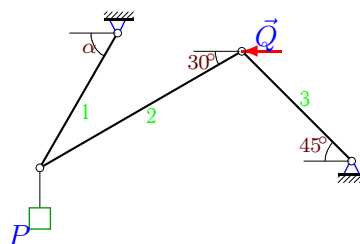
9



$P=11 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.12.

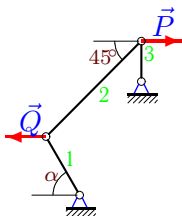
9



$P=18 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.13.

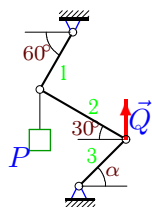
9



$P=33 \text{ кН}, Q=50 \text{ кН}.$

Задача 2.14.

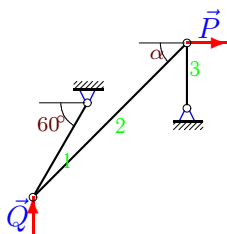
9



$P=29 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.15.

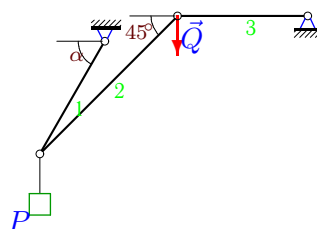
9



$P=28 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.16.

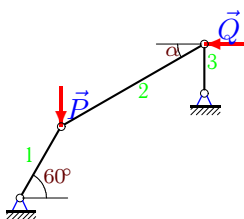
9



$P=4 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.17.

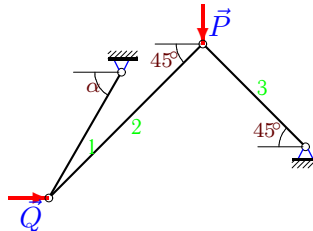
9



$P=28 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.18.

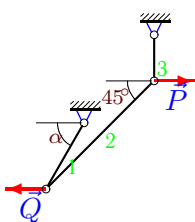
9



$P=6 \text{ кН}, Q=1 \text{ кН}.$

Задача 2.19.

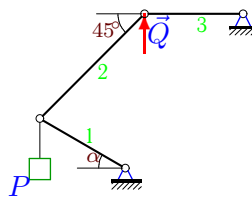
9



$P=25 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.20.

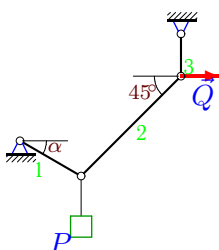
9



$P=30 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.21.

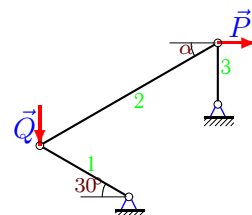
9



$P=15 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.22.

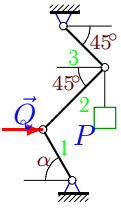
9



$P=8 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.23.

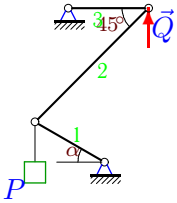
9



$P=18 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.25.

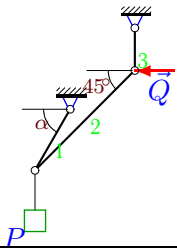
9



$P=14 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.27.

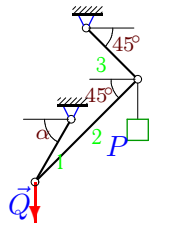
9



$P=17 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.29.

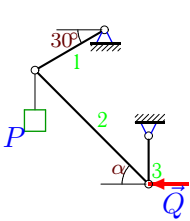
9



$P=29 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.31.

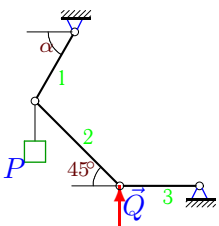
9



$P=11 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.33.

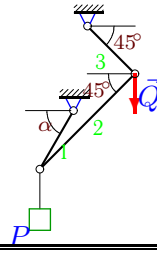
9



$P=32 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.24.

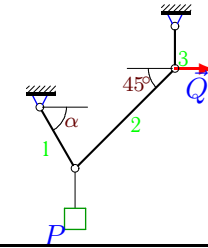
9



$P=25 \text{ кН}, Q=70 \text{ кН}.$

Задача 2.26.

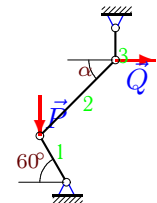
9



$P=14 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.28.

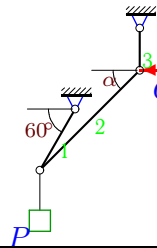
9



$P=14 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.30.

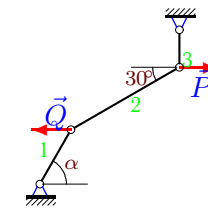
9



$P=4 \text{ кН}, Q=10 \text{ кН}.$

Задача 2.32.

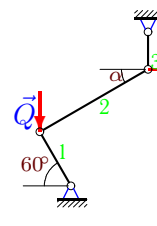
9



$P=31 \text{ кН}, Q=20 \text{ кН}.$

Задача 2.34.

9



$P=15 \text{ кН}, Q=30 \text{ кН}.$

Равновесие цепи из 3 звеньев

	$\operatorname{tg}\alpha$	α	S_1	S_2	S_3
1	0.576	0.522	52.000	30.000	-14.967
2	0.556	0.507	-34.000	19.448	-9.445
3	1.522	0.990	11.000	11.000	17.349
4	1.332	0.927	-15.011	-12.503	7.506
5	1.019	0.795	79.229	56.024	-56.571
6	10.517	1.476	-2.732	-1.932	14.431
7	0.100	0.100	10.050	14.142	10.000
8	1.714	1.043	55.570	39.598	28.000
9	1.477	0.976	35.679	-23.094	11.547
10	0.489	0.455	5.000	8.660	-8.350
11	0.846	0.702	8.515	7.778	-7.778
12	1.997	1.107	28.318	-14.641	10.353
13	1.941	1.095	37.121	46.669	-33.000
14	1.015	0.793	25.115	-14.500	17.896
15	1.018	0.794	-56.000	39.951	-28.497
16	1.400	0.951	17.205	-14.142	-10.000
17	0.332	0.321	-40.000	-21.074	6.641
18	1.500	0.983	3.606	-4.243	-4.243
19	1.667	1.030	-29.155	35.355	25.000
20	0.500	0.464	-22.361	28.284	20.000
21	0.500	0.464	11.180	14.142	10.000
22	0.673	0.592	-9.238	9.641	-5.381
23	9.000	1.460	-9.055	-12.728	12.728
24	1.714	1.043	69.462	-49.497	49.497
25	0.400	0.381	-10.770	14.142	-10.000
26	0.400	0.381	10.770	14.142	10.000
27	1.850	1.075	42.059	-28.284	-20.000
28	0.332	0.321	-20.000	10.537	-3.321
29	1.690	1.036	28.469	-20.506	20.506
30	1.332	0.927	20.000	-16.656	-13.321
31	0.523	0.482	11.547	-11.283	5.226
32	1.627	1.020	21.008	35.796	17.898
33	2.200	1.144	24.166	-14.142	-10.000
34	0.268	0.262	-30.000	15.529	4.019