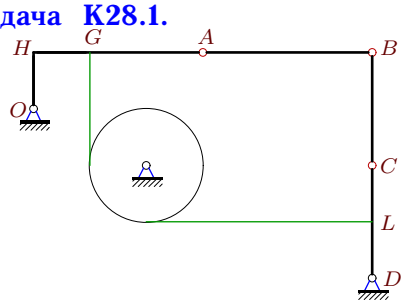
Плоский механизм с блоком

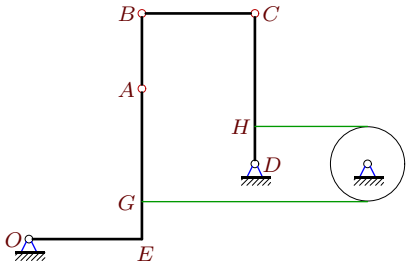
В указанном положении механизма задана угловая скорость одного из звеньев. Длины звеньев даны в сантиметрах. Стержни и нити, направление которых не указано, считать горизонтальными или вертикальными. Нить огибает диск радиусом r без проскальзывания. Найти угловые скорости всех звеньев механизма.

Задача К28.1.



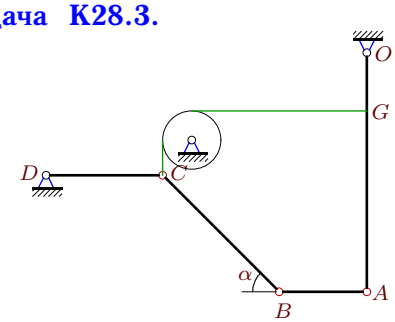
$OH = 1$, $CB = 2$, $HA = AB = 3$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{CD} = 2$ с$^{-1}$.

Задача К28.2.



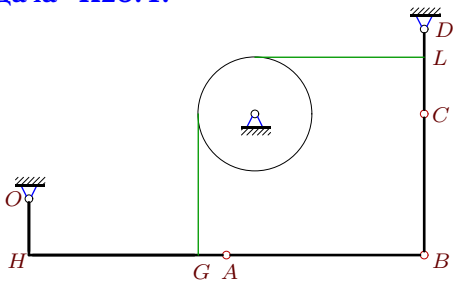
$OE = 3$, $CB = 3$, $AB = 2$, $CD = 4$, $r = 1$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.3.



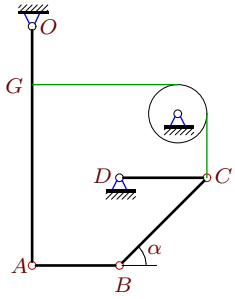
$OA = 8$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CB} = -12$ с$^{-1}$, $\alpha = 45°$.

Задача К28.4.



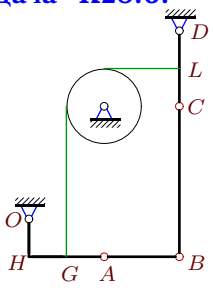
$OH = 2$, $CB = 5$, $HA = AB = 7$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{disk} = -15$ с$^{-1}$.

Задача К28.5.



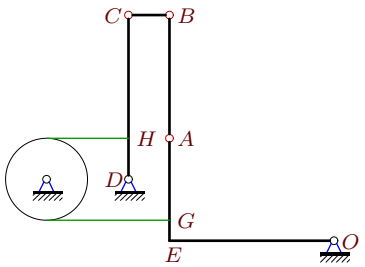
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CD} = 2$ с$^{-1}$, $\alpha = 45°$.

Задача К28.6.



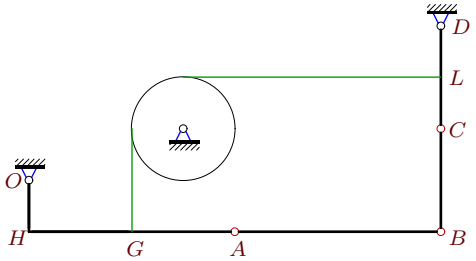
$OH = 1$, $CB = 4$, $HA = AB = 2$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{CB} = -1$ с$^{-1}$.

Задача К28.7.



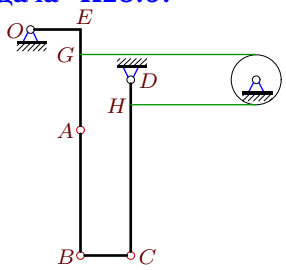
$OE = 8$, $CB = 2$, $AB = 6$, $CD = 8$, $r = 2$, $CH = 6$, $AG = 4$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.8.



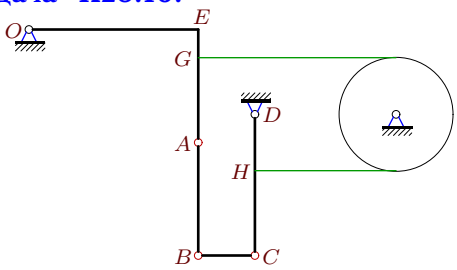
$OH = 1$, $CB = 2$, $HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{disk} = -4$ с$^{-1}$.

Задача К28.9.



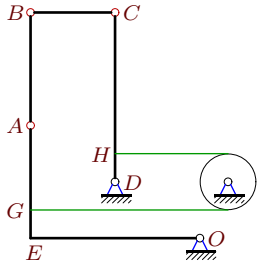
$OE = 2$, $CB = 2$, $AB = 5$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 3$, $GE = 1$, $\omega_{CD} = 5$ с$^{-1}$.

Задача К28.10.



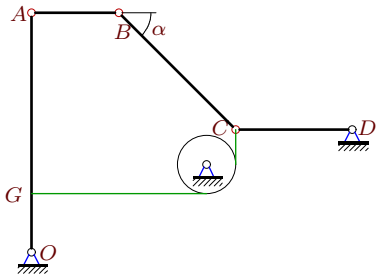
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 5$, $r = 2$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{CB} = 24$ с$^{-1}$.

Задача К28.11.



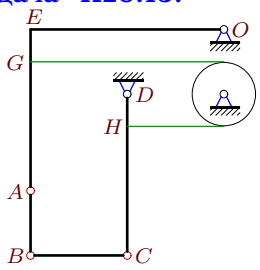
$OE = 6$, $CB = 3$, $AB = 4$, $CD = 6$, $r = 1$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{disk} = 2$ с$^{-1}$.

Задача К28.12.



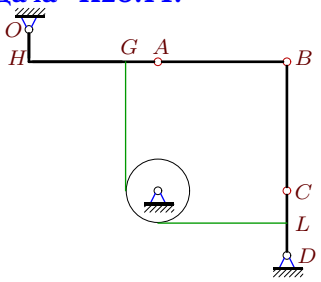
$OA = 8$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CD} = -3$ с$^{-1}$, $\alpha = 45°$.

Задача К28.13.



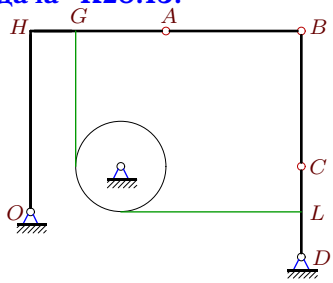
$OE = 6$, $CB = 3$, $AB = 2$, $CD = 5$, $r = 1$, $CH = 4$, $AG = 4$, $GE = 1$, $\omega_{disk} = 1$ с$^{-1}$.

Задача К28.14.



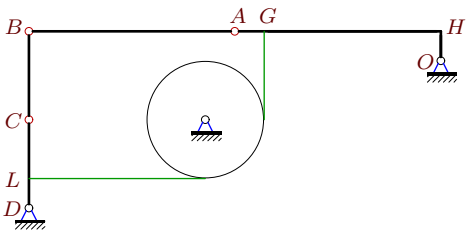
$OH = 1$, $CB = HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{CD} = 12$ с$^{-1}$.

Задача К28.15.



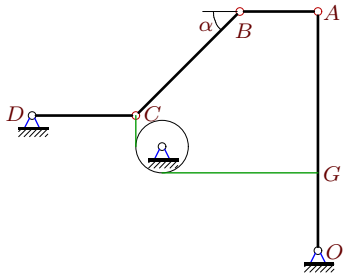
$OH = 4$, $CB = HA = AB = 3$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{CB} = 2$ с$^{-1}$.

Задача К28.16.



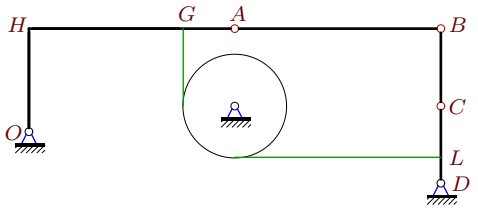
$OH = 1$, $CB = 3$, $HA = AB = 7$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{AB} = -3$ с$^{-1}$.

Задача К28.17.



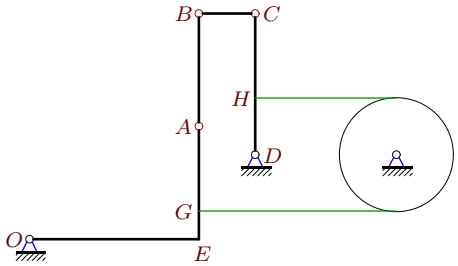
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{disk} = 12$ с$^{-1}$, $\alpha = 45°$.

Задача К28.18.



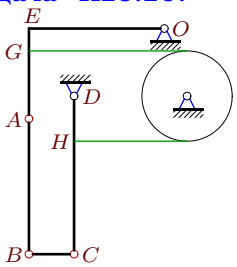
$OH = 4$, $CB = 3$, $HA = AB = 8$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CD} = 18$ с$^{-1}$.

Задача К28.19.



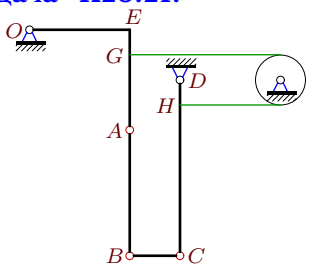
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 5$, $r = 2$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{OA} = -8$ с$^{-1}$.

Задача К28.20.



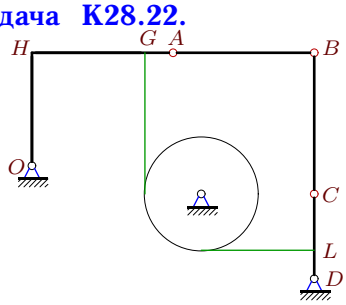
$OE = 6$, $CB = 2$, $AB = 6$, $CD = 7$, $r = 2$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{AB} = 5$ с$^{-1}$.

Задача К28.21.



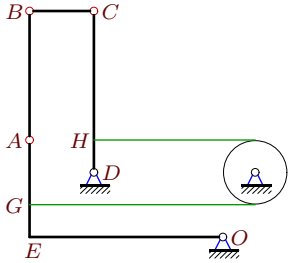
$OE = 4$, $CB = 2$, $AB = 5$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 3$, $GE = 1$, $\omega_{AB} = 11$ с$^{-1}$.

Задача К28.22.



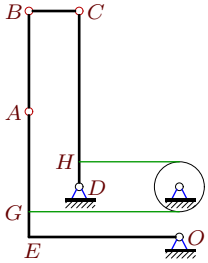
$OH = 4$, $CB = HA = AB = 5$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{CD} = 20$ с$^{-1}$.

Задача К28.23.



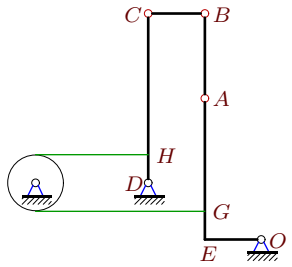
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 5$, $r = 1$, $CH = 4$, $AG = 2$, $GE = 1$, $\omega_{CB} = -3$ с$^{-1}$.

Задача К28.24.



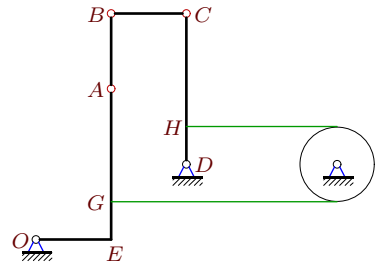
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 4$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.25.



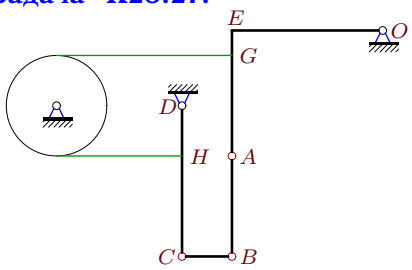
$OE = 2$, $CB = 2$, $AB = 3$, $CD = 6$, $r = 1$, $CH = 5$, $AG = 4$, $GE = 1$, $\omega_{CB} = 3$ с$^{-1}$.

Задача К28.26.



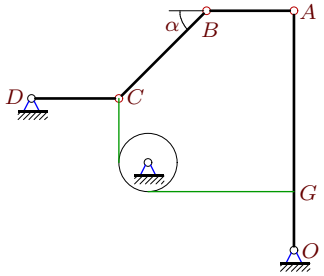
$OE = 2$, $CB = 2$, $AB = 2$, $CD = 4$, $r = 1$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.27.



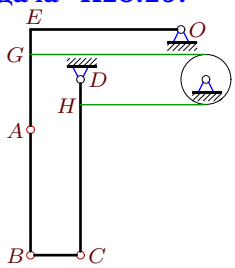
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 6$, $r = 2$, $CH = 4$, $AG = 4$, $GE = 1$, $\omega_{disk} = 1$ с$^{-1}$.

Задача К28.28.



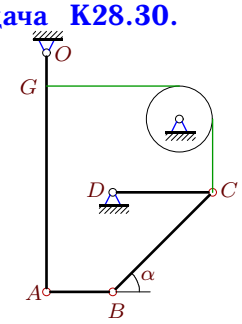
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{disk} = 6$ с$^{-1}$, $\alpha = 45°$.

Задача К28.29.



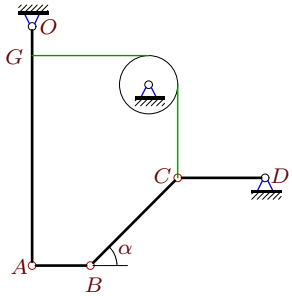
$OE = 6$, $CB = 2$, $AB = 5$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 3$, $GE = 1$, $\omega_{CB} = -15$ с$^{-1}$.

Задача К28.30.



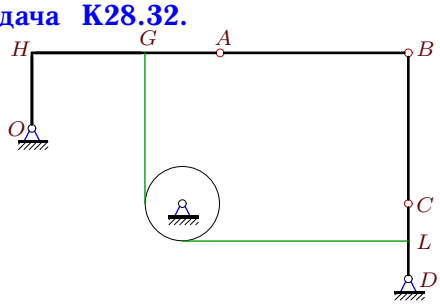
$OA = 7$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{AB} = 12$ с$^{-1}$, $\alpha = 45°$.

Задача К28.31.



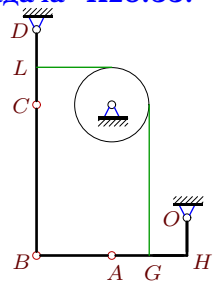
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{AB} = 27$ с$^{-1}$, $\alpha = 45°$.

Задача К28.32.



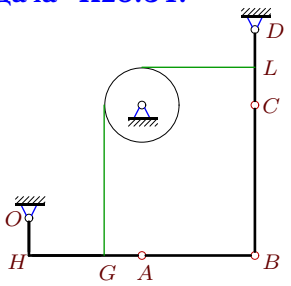
$OH = 2$, $CB = 4$, $HA = AB = 5$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{OA} = 1$ с$^{-1}$.

Задача К28.33.



$OH = 1$, $CB = 4$, $HA = AB = 2$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{disk} = -4$ с$^{-1}$.

Задача К28.34.



$OH = 1$, $CB = 4$, $HA = AB = 3$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{CB} = -3$ с$^{-1}$.

К28 Ответы.
Плоский механизм с блоком

15.09.2011

№	ω_{OA_z}	ω_{AB_z}	ω_{CB_z}	ω_{CD_z}	ω_{disk_z}
1	2	-2	-1	—	-2
2	-1	4	1	—	1
3	-6	20	—	-3	12
4	5	-5	-16	30	—
5	-3	10	-8	—	6
6	4	-4	—	4	-4
7	-2	3	8	—	1
8	2	-2	-3	4	—
9	-5	11	5	—	5
10	-8	13	—	4	4
11	-2	5	-4	2	—
12	-6	20	-12	—	12
13	-1	5	-2	1	—
14	4	-4	-7	—	-12
15	3	-3	—	3	-3
16	3	—	-17	18	-9
17	-4	16	-9	-3	—
18	3	-3	-14	—	-9
19	—	13	24	4	4
20	-4	—	-12	2	2
21	-5	—	10	5	5
22	5	-5	-8	—	-10
23	-1	2	—	1	1
24	-1	3	-3	—	1
25	-3	11	—	3	3
26	-1	4	1	—	1
27	-2	4	6	1	—
28	-3	10	-8	-2	—
29	-5	11	—	5	5
30	-3	—	-7	1	3
31	-6	—	-16	-2	6
32	—	-1	-1	3	-3
33	4	-4	-1	4	—
34	4	-4	—	8	-8

К28 файл o28k1A