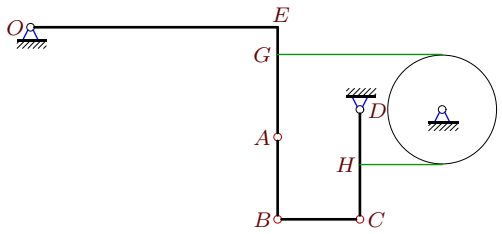
Плоский механизм с блоком

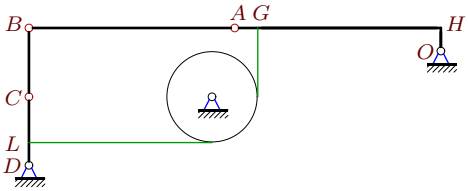
В указанном положении механизма задана угловая скорость одного из звеньев. Длины звеньев даны в сантиметрах. Стержни и нити, направление которых не указано, считать горизонтальными или вертикальными. Нить огибает диск радиусом r без проскальзывания. Найти угловые скорости всех звеньев механизма.

Задача К28.1.



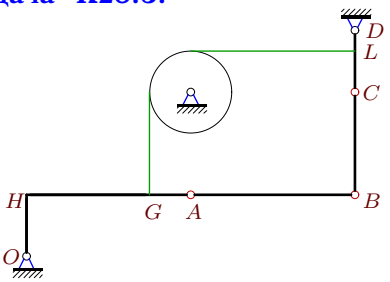
$OE = 9$, $CB = 3$, $AB = 3$, $CD = 4$, $r = 2$, $CH = 2$, $AG = 3$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.2.



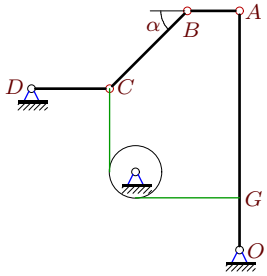
$OH = 1$, $CB = 3$, $HA = AB = 9$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{AB} = -3$ с$^{-1}$.

Задача К28.3.



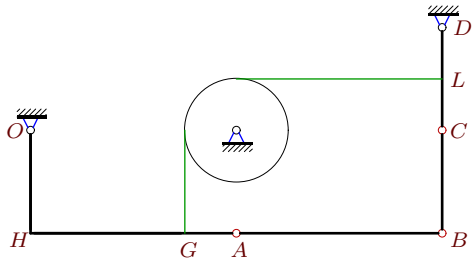
$OH = 3$, $CB = 5$, $HA = AB = 8$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CB} = -21$ с$^{-1}$.

Задача К28.4.



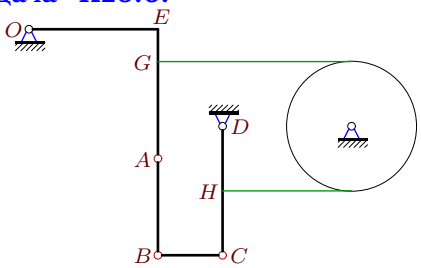
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{CD} = -4$ с$^{-1}$, $\alpha = 45°$.

Задача К28.5.



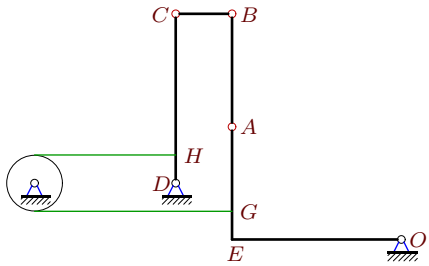
$OH = 2$, $CB = 2$, $HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{AB} = -1$ с$^{-1}$.

Задача К28.6.



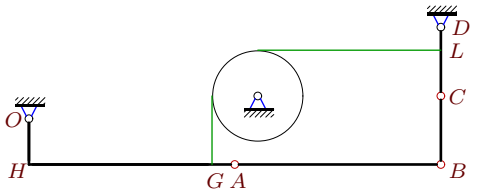
$OE = 4$, $CB = 2$, $AB = 3$, $CD = 4$, $r = 2$, $CH = 2$, $AG = 3$, $GE = 1$, $\omega_{AB} = 4$ с$^{-1}$.

Задача К28.7.



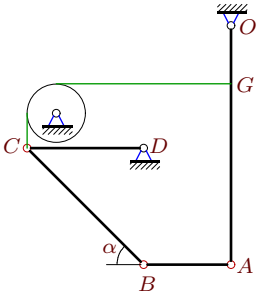
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 6$, $r = 1$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{AB} = 5$ с$^{-1}$.

Задача К28.8.



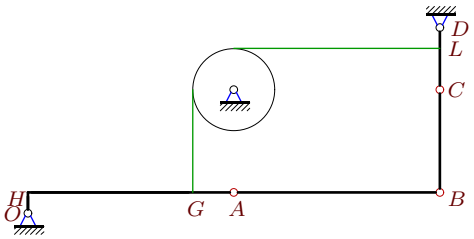
$OH = 2$, $CB = 3$, $HA = AB = 9$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{CB} = -22$ с$^{-1}$.

Задача К28.9.



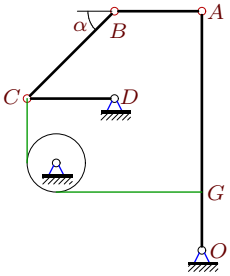
$OA = 8$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{OA} = -6$ с$^{-1}$, $\alpha = 45°$.

Задача К28.10.



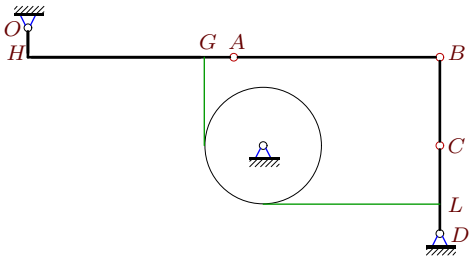
$OH = 1$, $CB = 5$, $HA = AB = 10$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CB} = -5$ с$^{-1}$.

Задача К28.11.



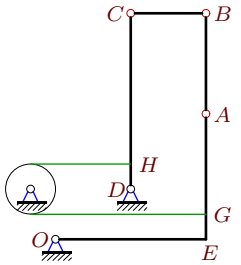
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{OA} = -3$ с$^{-1}$, $\alpha = 45°$.

Задача К28.12.



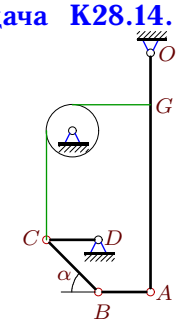
$OH = 1$, $CB = 3$, $HA = AB = 7$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{CD} = 18$ с$^{-1}$.

Задача К28.13.



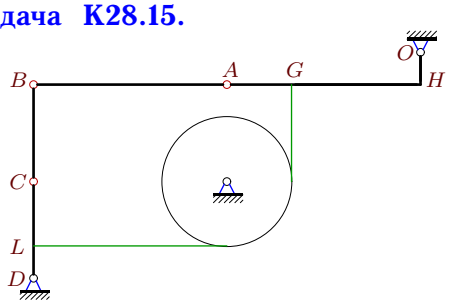
$OE = 6$, $CB = 3$, $AB = 4$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 4$, $GE = 1$, $\omega_{OA} = -1$ с$^{-1}$.

Задача К28.14.



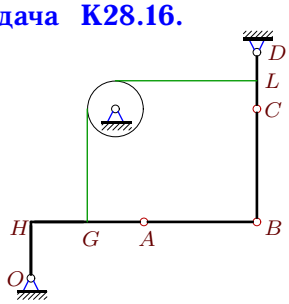
$OA = 9$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{CB} = -9$ с$^{-1}$, $\alpha = 45°$.

Задача К28.15.



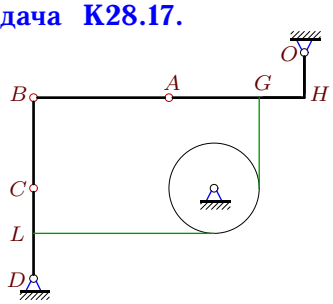
$OH = 1$, $CB = 3$, $HA = AB = 6$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{OA} = 3$ с$^{-1}$.

Задача К28.16.



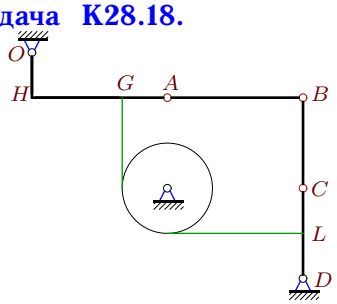
$OH = 2$, $CB = HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{OA} = 2$ с$^{-1}$.

Задача К28.17.



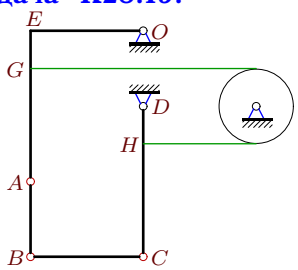
$OH = 1$, $CB = 2$, $HA = AB = 3$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{AB} = -2$ с$^{-1}$.

Задача К28.18.



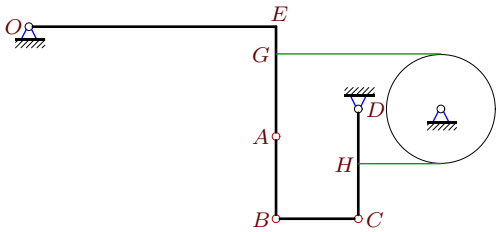
$OH = 1$, $CB = 2$, $HA = AB = 3$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{AB} = -2$ с$^{-1}$.

Задача К28.19.



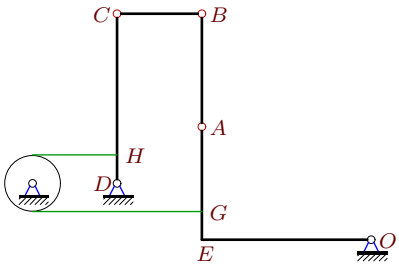
$OE = 3$, $CB = 3$, $AB = 2$, $CD = 4$, $r = 1$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{AB} = 4$ с$^{-1}$.

Задача К28.20.



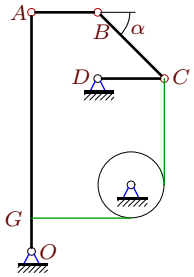
$OE = 9$, $CB = 3$, $AB = 3$, $CD = 4$, $r = 2$, $CH = 2$, $AG = 3$, $GE = 1$, $\omega_{CB} = 6$ с$^{-1}$.

Задача К28.21.



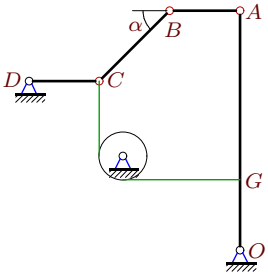
$OE = 6$, $CB = 3$, $AB = 4$, $CD = 6$, $r = 1$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{OA} = -2$ с$^{-1}$.

Задача К28.22.



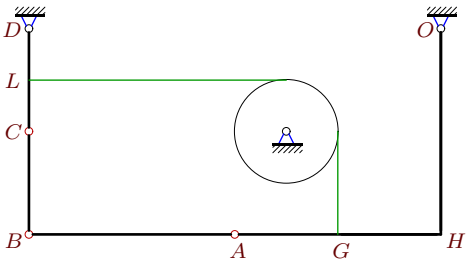
$OA = 7$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{CB} = -7$ с$^{-1}$, $\alpha = 45°$.

Задача К28.23.



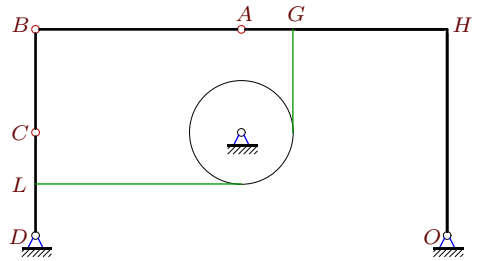
$OA = 10$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{disk} = 9$ с$^{-1}$, $\alpha = 45°$.

Задача К28.24.



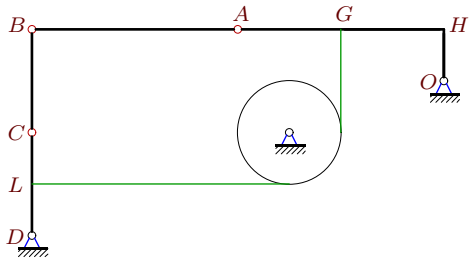
$OH = 4$, $CB = 2$, $HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{OA} = 1$ с$^{-1}$.

Задача К28.25.



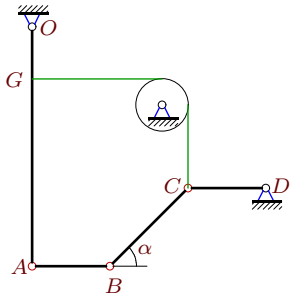
$OH = 4$, $CB = 2$, $HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{CD} = 3$ с$^{-1}$.

Задача К28.26.



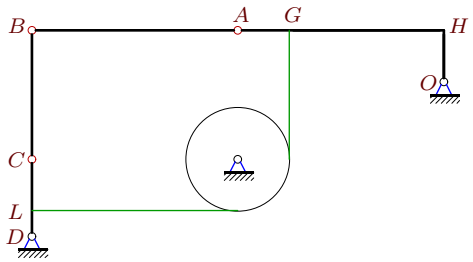
$OH = 1$, $CB = 2$, $HA = AB = 4$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 2$, $\omega_{CD} = 4$ с$^{-1}$.

Задача К28.27.



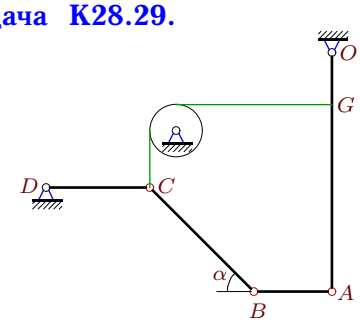
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CD} = -2$ с$^{-1}$, $\alpha = 45°$.

Задача К28.28.



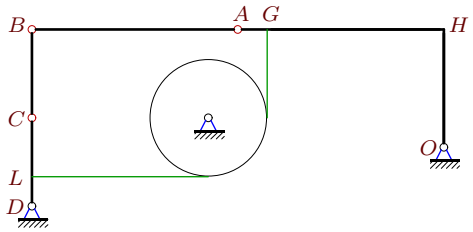
$OH = 2$, $CB = 5$, $HA = AB = 8$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{AB} = -5$ с$^{-1}$.

Задача К28.29.



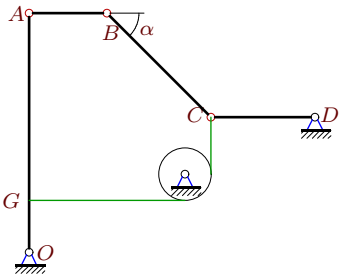
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CD} = -6$ с$^{-1}$, $\alpha = 45°$.

Задача К28.30.



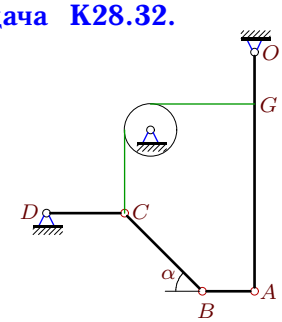
$OH = 4$, $CB = 3$, $HA = AB = 7$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{CD} = 18$ с$^{-1}$.

Задача К28.31.



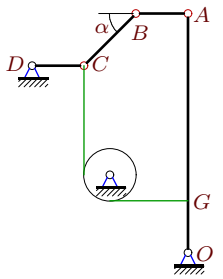
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CD} = -6$ с$^{-1}$, $\alpha = 45°$.

Задача К28.32.



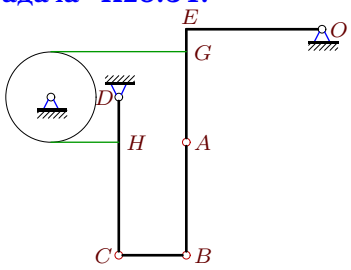
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{AB} = 33$ с$^{-1}$, $\alpha = 45°$.

Задача К28.33. 2



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

Задача К28.34. 2



$OE = 6$, $CB = 3$, $AB = 5$, $CD = 7$, $r = 2$, $CH = 5$, $AG = 4$, $GE = 1$, $\omega_{CB} = 20$ 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	4	6	—	1
2	3	—	-23	24	-12
3	5	-5	—	30	-15
4	-6	33	-18	—	12
5	1	—	-2	3	-3
6	-2	—	4	1	1
7	-2	—	6	2	2
8	3	-3	—	24	-12
9	—	20	-12	3	12
10	1	-1	—	8	-4
11	—	10	-8	2	6
12	3	-3	-19	—	-9
13	—	3	-2	1	1
14	-2	11	—	2	4
15	—	-3	-13	12	-6
16	—	-2	-3	4	-4
17	2	—	-3	2	-2
18	2	—	-5	4	-4
19	-1	—	-1	1	1
20	-2	4	—	1	1
21	—	5	4	2	2
22	-2	8	—	1	2
23	-3	13	-10	-3	—
24	—	-1	0	2	-2
25	1	-1	-1	—	-3
26	2	-2	-3	—	-4
27	-3	11	-9	—	6
28	5	—	-16	30	-15
29	-12	44	-27	—	24
30	3	-3	-14	—	-9
31	-12	44	-27	—	24
32	-6	—	-18	-4	12
33	-2	11	-9	—	4
34	-10	17	—	5	5

К28 файл o28k2A