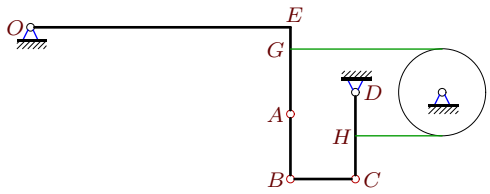
Плоский механизм с блоком

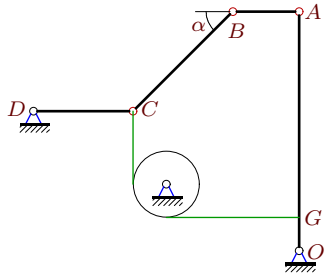
В указанном положении механизма задана угловая скорость одного из звеньев. Длины звеньев даны в сантиметрах. Стержни и нити, направление которых не указано, считать горизонтальными или вертикальными. Нить огибает диск радиусом r без проскальзывания. Найти угловые скорости всех звеньев механизма.

Задача К28.1. 4



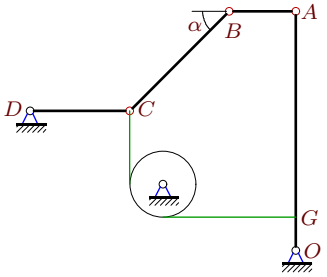
$OE = 12$, $CB = 3$, $AB = 3$, $CD = 4$, $r = 2$, $CH = 2$, $AG = 3$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.2. 4



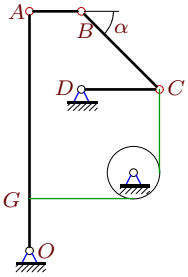
$OA = 7$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{disk} = 3$ с$^{-1}$, $\alpha = 45°$.

Задача К28.3. 4



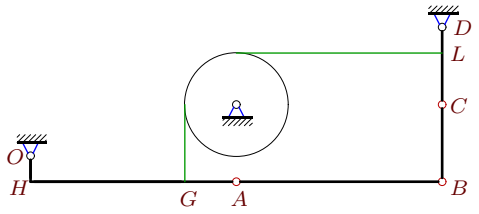
$OA = 7$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{disk} = 3$ с$^{-1}$, $\alpha = 45°$.

Задача К28.4. 4



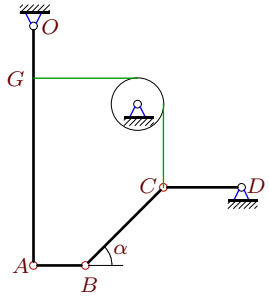
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{AB} = 33$ с$^{-1}$, $\alpha = 45°$.

Задача К28.5. 4



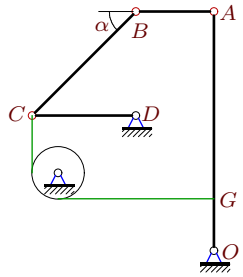
$OH = 1$, $CB = 3$, $HA = AB = 8$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CD} = 18$ с$^{-1}$.

Задача К28.6. 4



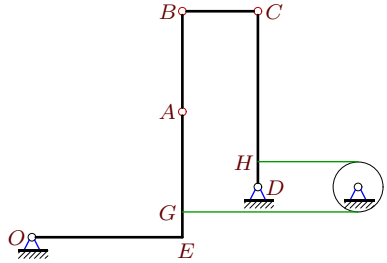
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{CB} = -18$ с$^{-1}$, $\alpha = 45°$.

Задача К28.7. 4



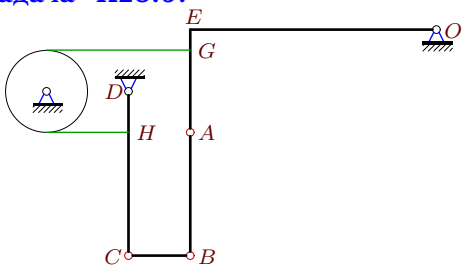
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CB} = -27$ с$^{-1}$, $\alpha = 45°$.

Задача К28.8. 4



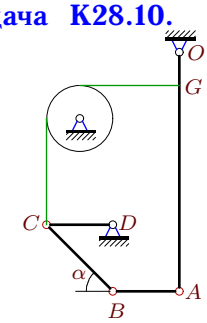
$OE = 6$, $CB = 3$, $AB = 4$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 4$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.9. 4



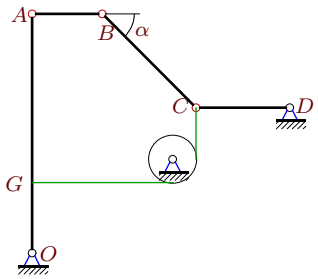
$OE = 12$, $CB = 3$, $AB = 6$, $CD = 8$, $r = 2$, $CH = 6$, $AG = 4$, $GE = 1$, $\omega_{disk} = 1$ с$^{-1}$.

Задача К28.10. 4



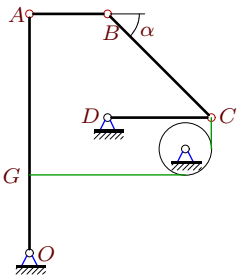
$OA = 7$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{AB} = 8$ с$^{-1}$, $\alpha = 45°$.

Задача К28.11. 4



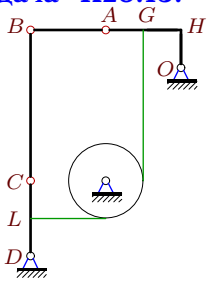
$OA = 10$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{CD} = -9$ с$^{-1}$, $\alpha = 45°$.

Задача К28.12. 4



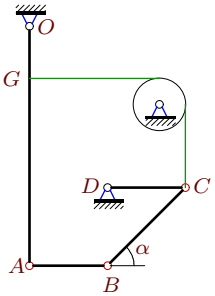
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{AB} = 16$ с$^{-1}$, $\alpha = 45°$.

Задача К28.13. 4



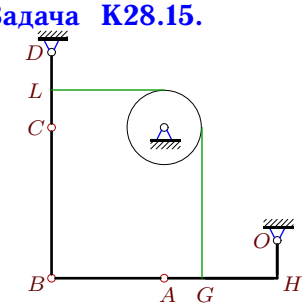
$OH = 1$, $CB = 4$, $HA = AB = 2$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{CD} = 4$ с$^{-1}$.

Задача К28.14. 4



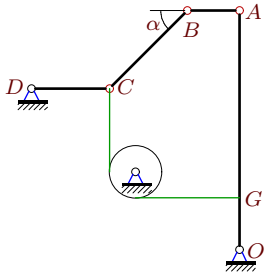
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{disk} = 6$ с$^{-1}$, $\alpha = 45°$.

Задача К28.15.



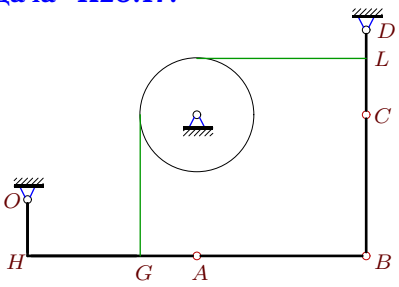
$OH = 1$, $CB = 4$, $HA = AB = 3$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{AB} = -4$ с$^{-1}$.

Задача К28.16.



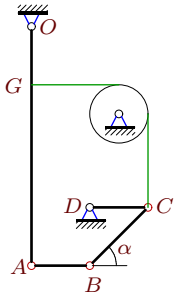
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{disk} = 12$ с$^{-1}$, $\alpha = 45°$.

Задача К28.17.



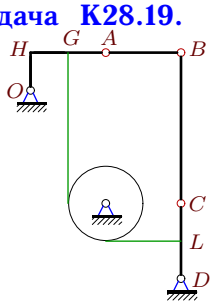
$OH = 2$, $CB = 5$, $HA = AB = 6$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CD} = 4$ с$^{-1}$.

Задача К28.18.



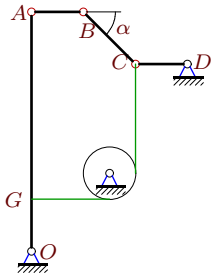
$OA = 8$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{CB} = -4$ с$^{-1}$, $\alpha = 45°$.

Задача К28.19.



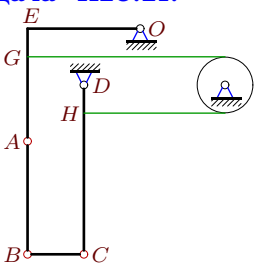
$OH = 1$, $CB = 4$, $HA = AB = 2$, $CD = 2$, $r = 1$, $CL = 1$, $AG = 1$, $\omega_{OA} = 4$ с$^{-1}$.

Задача К28.20.



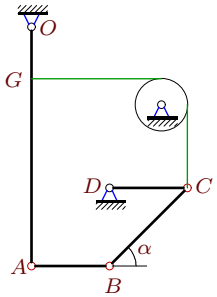
$OA = 9$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{disk} = 4$ с$^{-1}$, $\alpha = 45°$.

Задача К28.21.



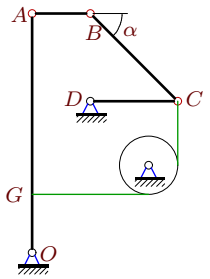
$OE = 4$, $CB = 2$, $AB = 4$, $CD = 6$, $r = 1$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{AB} = 5$ с$^{-1}$.

Задача К28.22.



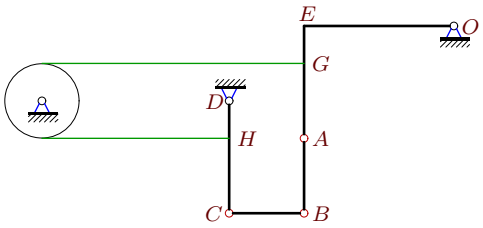
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CB} = -9$ с$^{-1}$, $\alpha = 45°$.

Задача К28.23.



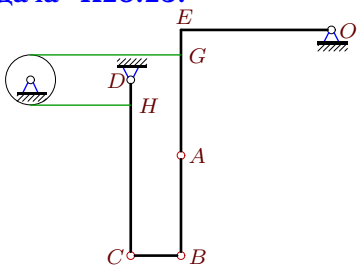
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{CD} = 2$ с$^{-1}$, $\alpha = 45°$.

Задача К28.24.



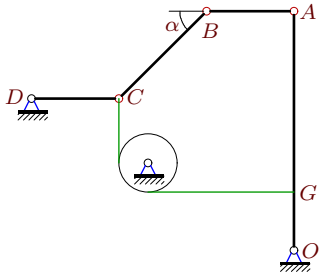
$OE = 4$, $CB = 2$, $AB = 2$, $CD = 3$, $r = 1$, $CH = 2$, $AG = 2$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.25.



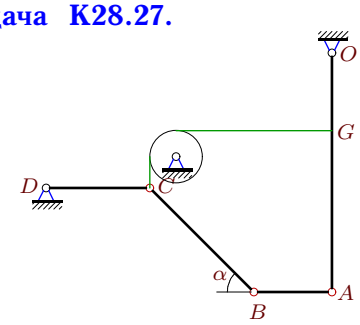
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 7$, $r = 1$, $CH = 6$, $AG = 4$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.26.



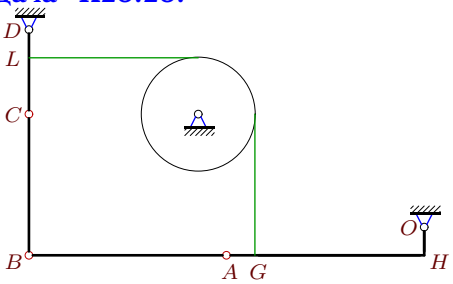
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{CD} = -2$ с$^{-1}$, $\alpha = 45°$.

Задача К28.27.



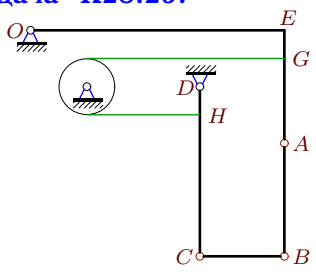
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{disk} = 12$ с$^{-1}$, $\alpha = 45°$.

Задача К28.28.



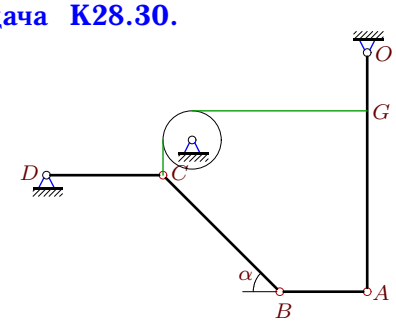
$OH = 1$, $CB = 5$, $HA = AB = 7$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{CB} = -17$ с$^{-1}$.

Задача К28.29.



$OE = 9$, $CB = 3$, $AB = 4$, $CD = 6$, $r = 1$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{CD} = 2$ с$^{-1}$.

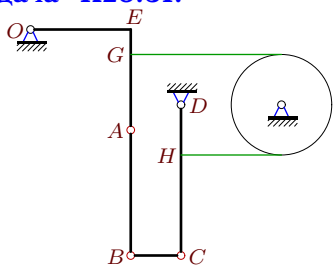
Задача К28.30.



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

Задача К28.31.

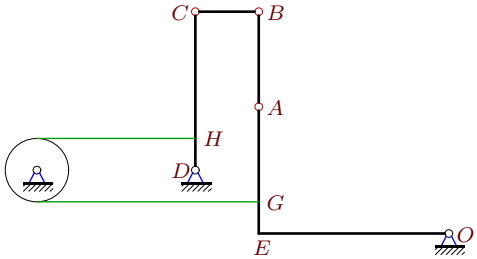
4



$OE = 4$, $CB = 2$, $AB = 5$, $CD = 6$, $r = 2$, $CH = 4$, $AG = 3$, $GE = 1$, $\omega_{OA} = -10$ с$^{-1}$.

Задача К28.32.

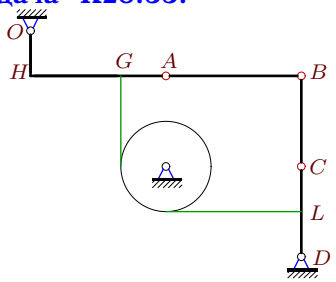
4



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

Задача К28.33.

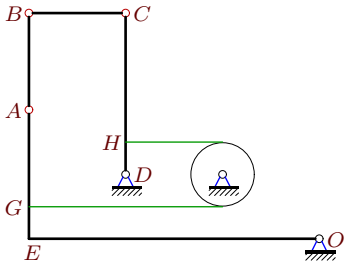
4



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

Задача К28.34.

4



$OE = 9$, $CB = 3$, $AB = 3$, $CD = 5$, $r = 1$, $CH = 4$, $AG = 3$, $GE = 1$, $\omega_{CD} = 1$ 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	8	—	1
2	-3	12	-7	-1	—
3	-3	12	-7	-1	—
4	-6	—	-18	4	12
5	3	-3	-17	—	-9
6	-6	33	—	-4	12
7	-12	44	—	6	24
8	-1	3	2	—	1
9	-2	3	8	1	—
10	-2	—	-7	1	2
11	-12	52	-30	—	36
12	-4	—	-9	3	12
13	4	-4	-1	—	-4
14	-3	11	-9	2	—
15	4	—	-3	8	-8
16	-6	33	-18	-4	—
17	1	-1	-2	—	-2
18	-1	5	—	1	2
19	—	-4	-1	4	-4
20	-2	11	-9	-2	—
21	-2	—	-4	2	2
22	-3	11	—	2	6
23	-3	15	-8	—	6
24	-1	3	2	—	1
25	-1	3	3	—	1
26	-3	10	-8	—	6
27	-4	16	-9	-3	—
28	5	-5	—	30	-15
29	-2	5	-6	—	2
30	-6	20	-12	—	12
31	—	14	20	5	5
32	-1	3	3	—	1
33	2	-2	-5	4	—
34	-1	3	-3	—	1

К28 файл o28k4A