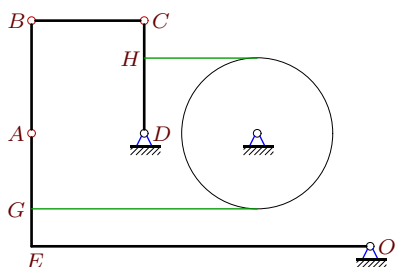# Плоский механизм с блоком

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.
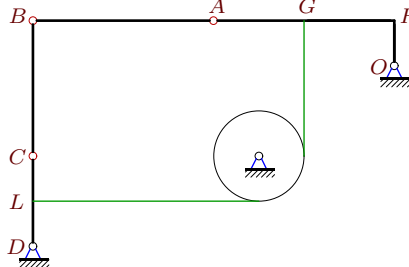
Задача К28.1. 5

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

Задача К28.2. 5

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

Задача К28.3. 5
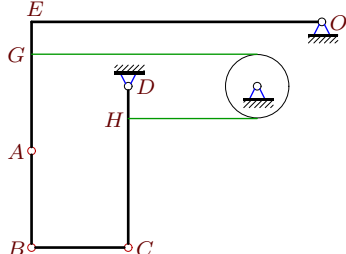
$OE = 9$, $CB = 3$, $AB = 3$, $CD = 5$, $r = 1$, $CH = 4$, $AG = 3$, $GE = 1$, $\omega_{disk} = 1$ c^{-1}.

Задача К28.4. 5
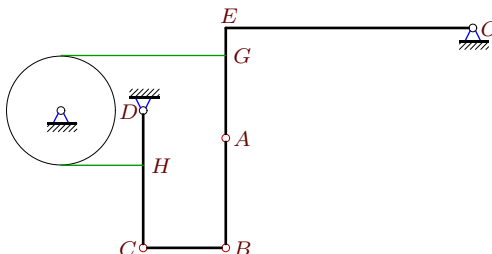
$OE = 9$, $CB = 3$, $AB = 4$, $CD = 5$, $r = 2$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{OA} = -8$ c^{-1}.

Задача К28.5. 5
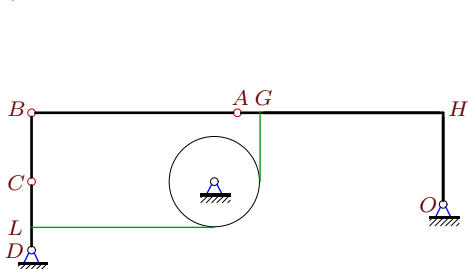
$OH = 4$, $CB = 3$, $HA = AB = 9$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 1$, $\omega_{CB} = -20$ c^{-1}.

Задача К28.6. 5
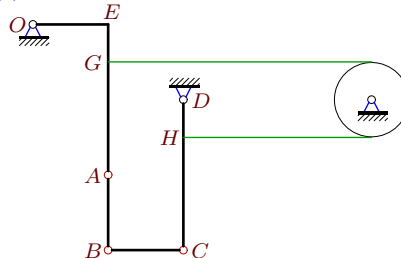
$OE = 2$, $CB = 2$, $AB = 2$, $CD = 4$, $r = 1$, $CH = 3$, $AG = 3$, $GE = 1$, $\omega_{OA} = -1$ c^{-1}.

Задача К28.7. 5
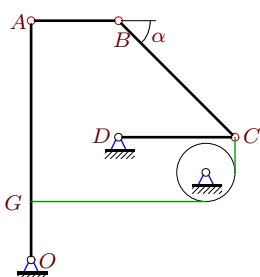
$OA = 8$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{OA} = -6$ c^{-1}, $\alpha = 45°$.

Задача К28.8. 5
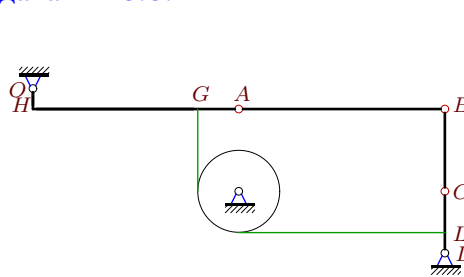
$OH = 1$, $CB = 4$, $HA = AB = 10$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{AB} = -4$ c^{-1}.

Задача К28.9.
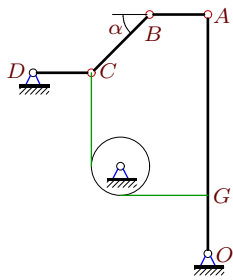
$OA = 8$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 2$, $r = 1$, $\omega_{CD} = -1$ с$^{-1}$, $\alpha = 45°$.

Задача К28.10.
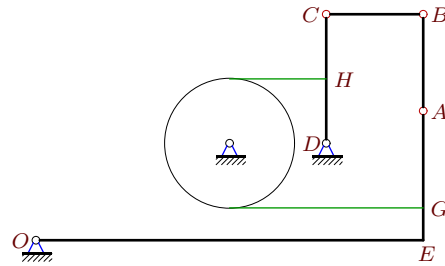
$OE = 12$, $CB = 3$, $AB = 3$, $CD = 4$, $r = 2$, $CH = 2$, $AG = 3$, $GE = 1$, $\omega_{OA} = -2$ с$^{-1}$.

Задача К28.11.
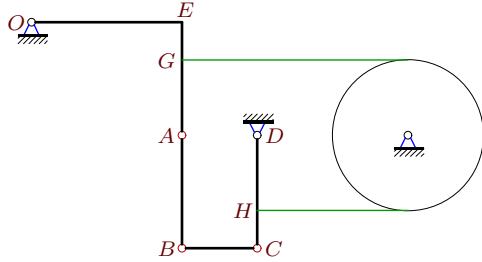
$OE = 4$, $CB = 2$, $AB = 3$, $CD = 3$, $r = 2$, $CH = 1$, $AG = 2$, $GE = 1$, $\omega_{AB} = 3$ с$^{-1}$.

Задача К28.12.
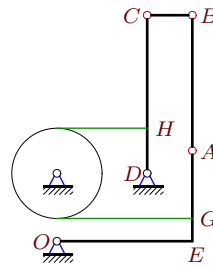
$OE = 6$, $CB = 2$, $AB = 6$, $CD = 7$, $r = 2$, $CH = 5$, $AG = 3$, $GE = 1$, $\omega_{disk} = 2$ с$^{-1}$.

Задача К28.13.
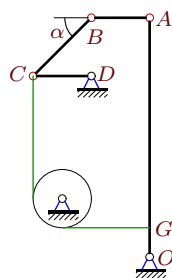
$OA = 8$, $CB = 2\sqrt{2}$, $CD = 2$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{CB} = -8$ с$^{-1}$, $\alpha = 45°$.

Задача К28.14.
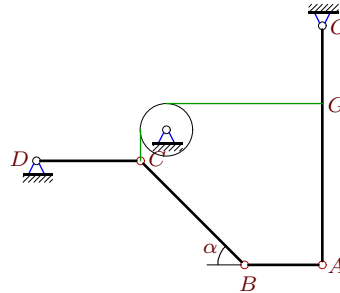
$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{CD} = -3$ с$^{-1}$, $\alpha = 45°$.

Задача К28.15.
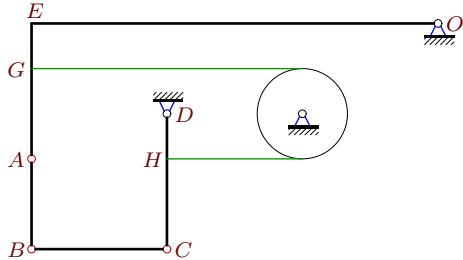
$OE = 9$, $CB = 3$, $AB = 2$, $CD = 3$, $r = 1$, $CH = 2$, $AG = 2$, $GE = 1$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.16.
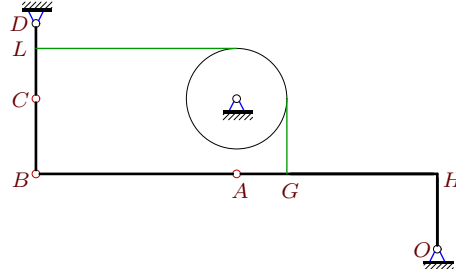
$OH = 3$, $CB = 3$, $HA = AB = 8$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CB} = -7$ с$^{-1}$.

Задача К28.17.
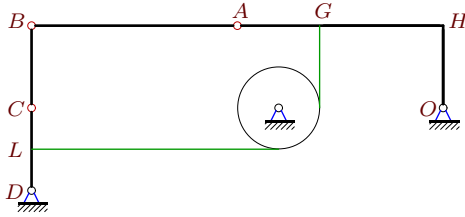
$OH = 2$, $CB = 2$, $HA = AB = 5$, $CD = 2$,
$r = 1$, $CL = 1$, $AG = 2$, $\omega_{OA} = 1$ с$^{-1}$.

Задача К28.18.
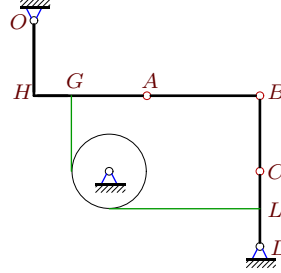
$OH = 2$, $CB = 2$, $HA = AB = 3$, $CD = 2$,
$r = 1$, $CL = 1$, $AG = 2$, $\omega_{CD} = 1$ с$^{-1}$.

Задача К28.19.
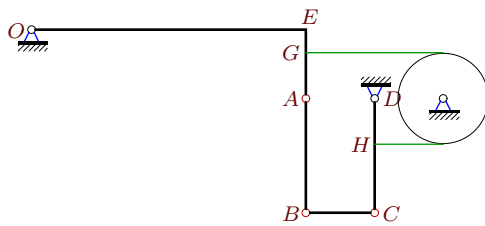
$OE = 12$, $CB = 3$, $AB = 5$, $CD = 5$, $r = 2$,
$CH = 3$, $AG = 2$, $GE = 1$, $\omega_{CD} = 5$ с$^{-1}$.

Задача К28.20.
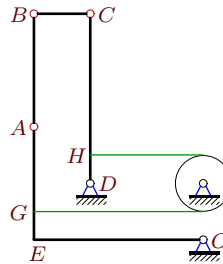
$OE = 6$, $CB = 2$, $AB = 4$, $CD = 6$, $r = 1$,
$CH = 5$, $AG = 3$, $GE = 1$, $\omega_{AB} = 5$ с$^{-1}$.

Задача К28.21.
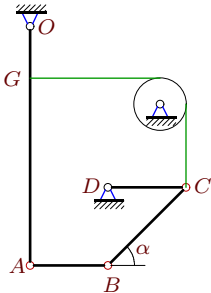
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$,
$OG = 2$, $r = 1$, $\omega_{AB} = 11$ с$^{-1}$, $\alpha = 45°$.

Задача К28.22.
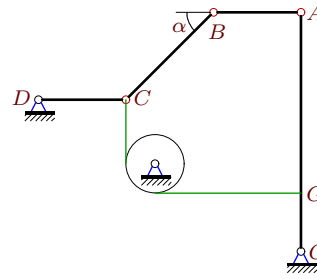
$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$,
$OG = 2$, $r = 1$, $\omega_{CB} = -8$ с$^{-1}$, $\alpha = 45°$.

Задача К28.23.
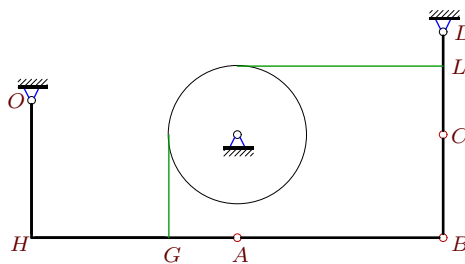
$OH = 4$, $CB = 3$, $HA = AB = 6$, $CD = 3$,
$r = 2$, $CL = 2$, $AG = 2$, $\omega_{OA} = 3$ с$^{-1}$.

Задача К28.24.
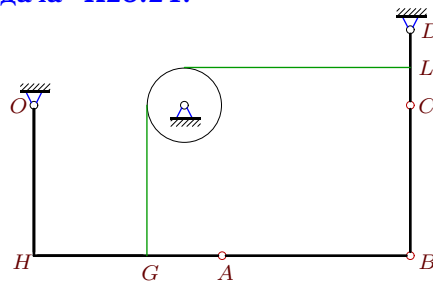
$OH = 4$, $CB = 4$, $HA = AB = 5$, $CD = 2$,
$r = 1$, $CL = 1$, $AG = 2$, $\omega_{AB} = -2$ с$^{-1}$.

Задача К28.25.
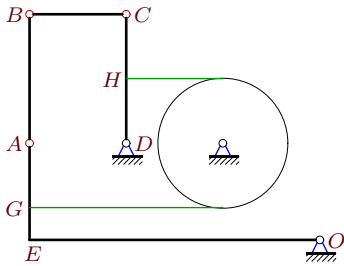
$OE = 9$, $CB = 3$, $AB = 4$, $CD = 4$, $r = 2$, $CH = 2$, $AG = 2$, $GE = 1$, $\omega_{disk} = 2$ с$^{-1}$.

Задача К28.26.
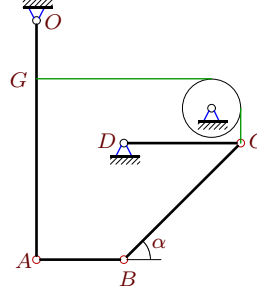
$OA = 8$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 2$, $r = 1$, $\omega_{AB} = 20$ с$^{-1}$, $\alpha = 45°$.

Задача К28.27.
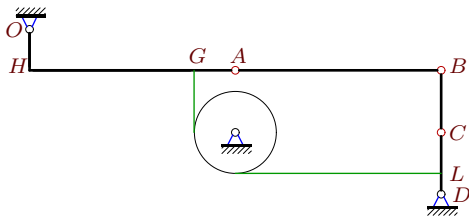
$OH = 2$, $CB = 3$, $HA = AB = 10$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{CB} = -26$ с$^{-1}$.
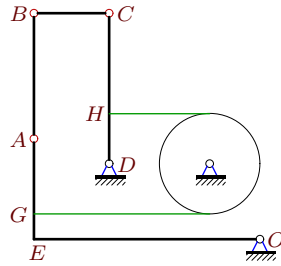
Задача К28.28.

$OE = 9$, $CB = 3$, $AB = 5$, $CD = 6$, $r = 2$, $CH = 4$, $AG = 3$, $GE = 1$, $\omega_{OA} = -10$ с$^{-1}$.
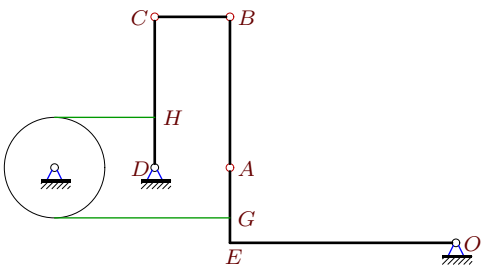
Задача К28.29.

$OE = 9$, $CB = 3$, $AB = 6$, $CD = 6$, $r = 2$, $CH = 4$, $AG = 2$, $GE = 1$, $\omega_{disk} = 1$ с$^{-1}$.
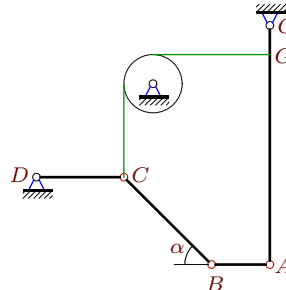
Задача К28.30.

$OA = 8$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 2$, $OG = 1$, $r = 1$, $\omega_{AB} = 27$ с$^{-1}$, $\alpha = 45°$.
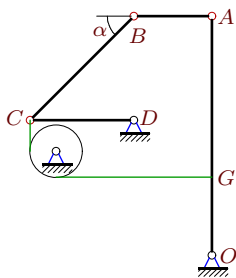
Задача К28.31.

$OA = 9$, $CB = 4\sqrt{2}$, $CD = 4$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{OA} = -4$ с$^{-1}$, $\alpha = 45°$.
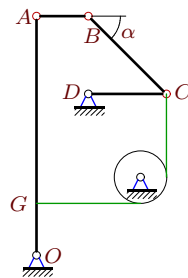
Задача К28.32.

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

Задача K28.33. ⁵
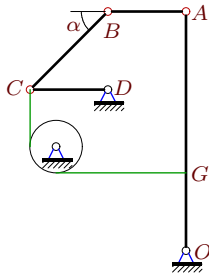
$OA = 9$, $CB = 3\sqrt{2}$, $CD = 3$, $AB = 3$, $OG = 3$, $r = 1$, $\omega_{CD} = 1$ с$^{-1}$, $\alpha = 45°$.

Задача K28.34. ⁵
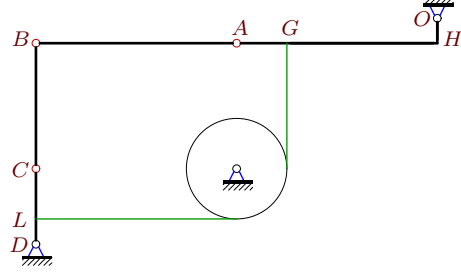
$OH = 1$, $CB = 5$, $HA = AB = 8$, $CD = 3$, $r = 2$, $CL = 2$, $AG = 2$, $\omega_{OA} = 5$ с$^{-1}$.

K28 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	3	—	1	1
2	1	—	-1	2	-2
3	-1	3	-3	1	—
4	—	13	24	4	4
5	3	-3	—	24	-12
6	—	4	1	1	1
7	—	20	-12	3	12
8	4	—	-25	32	-16
9	-1	5	-4	—	2
10	—	4	-8	1	1
11	-2	—	4	1	1
12	-4	5	-12	2	—
13	-2	9	—	1	2
14	-4	16	-9	—	12
15	-1	3	-3	—	1
16	1	-1	—	6	-3
17	—	-1	-2	3	-3
18	1	-1	-2	—	-1
19	-10	11	40	—	5
20	-2	—	-6	2	2
21	-3	—	-9	2	6
22	-3	10	—	-2	6
23	—	-3	-8	12	-6
24	2	—	-1	6	-6
25	-4	5	-12	2	—
26	-6	—	-12	3	12
27	3	-3	—	24	-12
28	—	14	-30	5	5
29	-2	2	6	1	—
30	-6	—	-16	-2	6
31	—	16	-9	3	12
32	-6	33	-18	—	12
33	-1	4	-3	—	3
34	—	-5	-19	30	-15

K28 файл   o28k5A