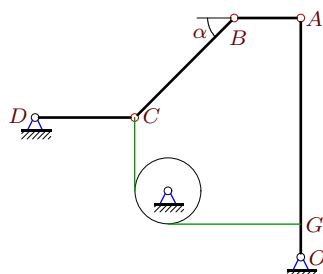


Плоский механизм с блоком

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 K28.1.

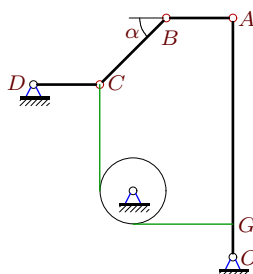
6



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

Задача K28.2.

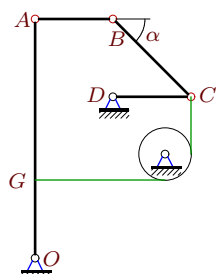
6



$$OA = 7, CB = 2\sqrt{2}, CD = 2, AB = 2, \\ OG = 1, r = 1, \omega_{disk} = 2 \text{ c}^{-1}, \alpha = 45^\circ.$$

Задача K28.3.

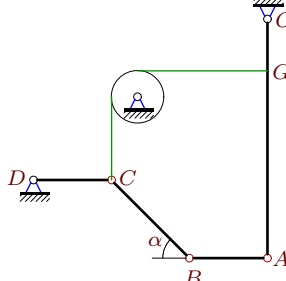
6



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

Задача K28.4.

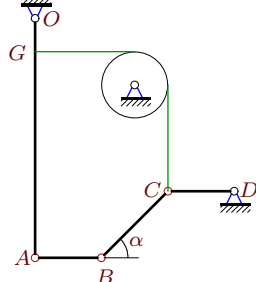
6



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

Задача K28.5.

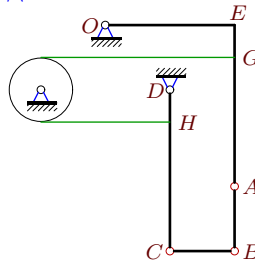
6



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

Задача K28.6.

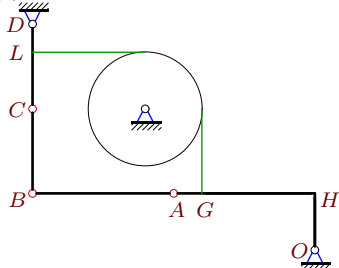
6



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

Задача K28.7.

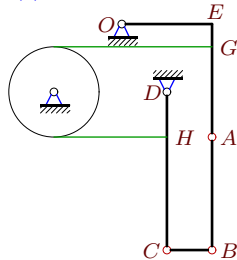
6



$$OH = 2, CB = 3, HA = AB = 5, CD = 3, \\ r = 2, CL = 2, AG = 1, \omega_{CD} = 12 \text{ c}^{-1}.$$

Задача K28.8.

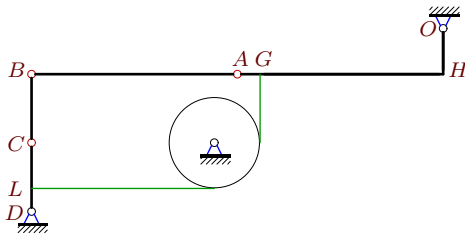
6



$$OE = 4, CB = 2, AB = 5, CD = 7, r = 2, \\ CH = 5, AG = 4, GE = 1, \omega_{CD} = 5 \text{ c}^{-1}.$$

Задача K28.9.

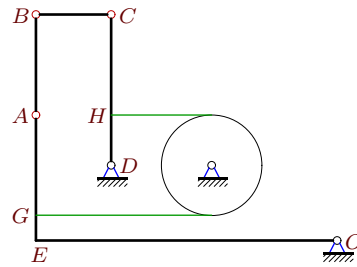
6



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

Задача K28.10.

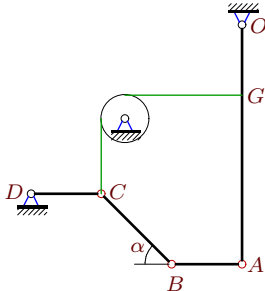
6



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

Задача K28.11.

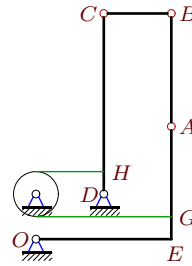
6



$OA = 10, CB = 3\sqrt{2}, CD = 3, AB = 3,$
 $OG = 3, r = 1, \omega_{OA} = -3 \text{ c}^{-1}, \alpha = 45^\circ.$

Задача K28.12.

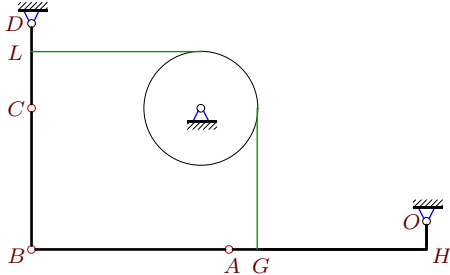
6



$OE = 6, CB = 3, AB = 5, CD = 8, r = 1,$
 $CH = 7, AG = 4, GE = 1, \omega_{disk} = 5 \text{ c}^{-1}.$

Задача K28.13.

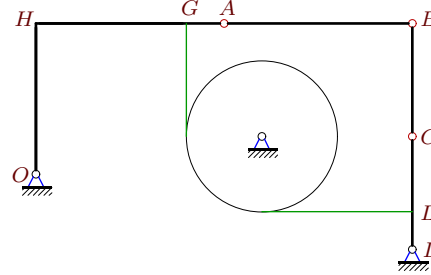
6



$OH = 1, CB = 5, HA = AB = 7, CD = 3,$
 $r = 2, CL = 2, AG = 1, \omega_{CD} = 30 \text{ c}^{-1}.$

Задача K28.14.

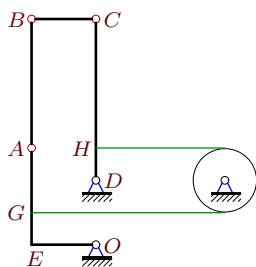
6



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

Задача K28.15.

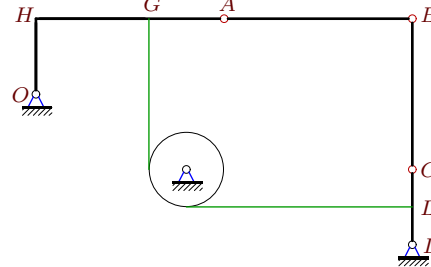
6



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

Задача K28.16.

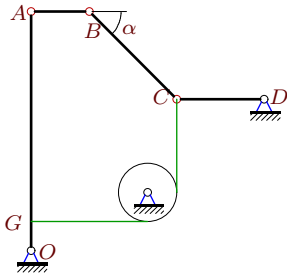
6



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

Задача K28.17.

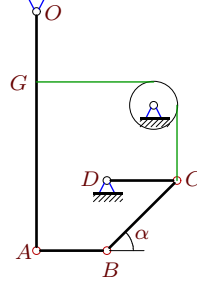
6



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

Задача K28.18.

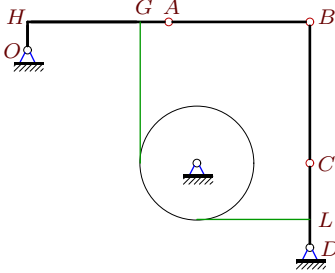
6



$OA = 10, CB = 3\sqrt{2}, CD = 3, AB = 3,$
 $OG = 3, r = 1, \omega_{AB} = 13 \text{ c}^{-1}, \alpha = 45^\circ.$

Задача K28.19.

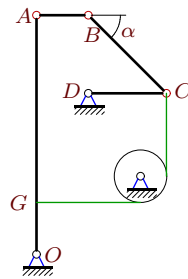
6



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

Задача K28.20.

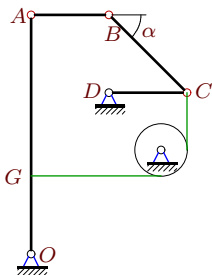
6



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

Задача K28.21.

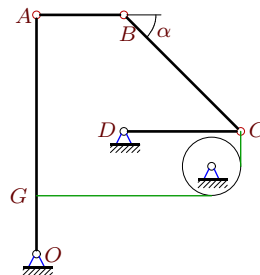
6



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

Задача K28.22.

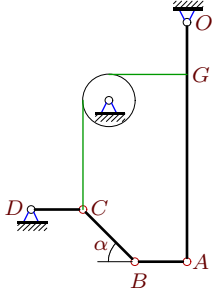
6



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

Задача K28.23.

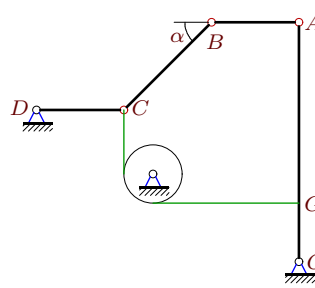
6



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

Задача K28.24.

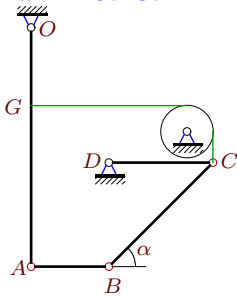
6



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

Задача K28.25.

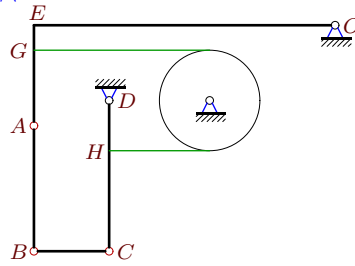
6



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

Задача K28.26.

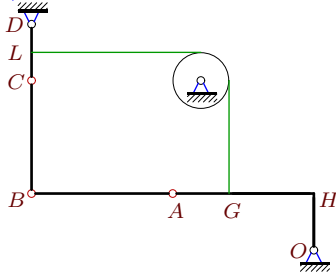
6



$OE = 12, CB = 3, AB = 5, CD = 6, r = 2,$
 $CH = 4, AG = 3, GE = 1, \omega_{CD} = 5 \text{ c}^{-1}.$

Задача K28.27.

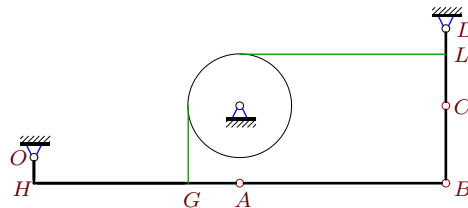
6



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

Задача K28.28.

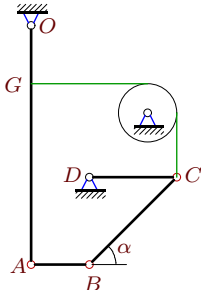
6



$OH = 1, CB = 3, HA = AB = 8, CD = 3,$
 $r = 2, CL = 2, AG = 2, \omega_{CB} = -17 \text{ c}^{-1}.$

Задача K28.29.

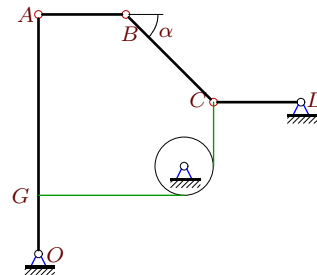
6



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

Задача K28.30.

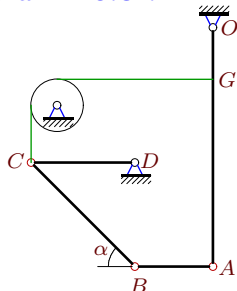
6



$OA = 8, CB = 3\sqrt{2}, CD = 3, AB = 3,$
 $OG = 2, r = 1, \omega_{AB} = 10 \text{ c}^{-1}, \alpha = 45^\circ.$

Задача K28.31.

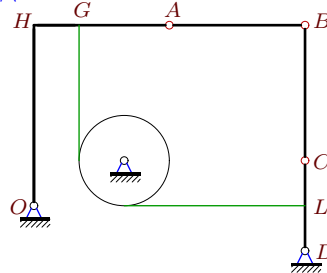
6



$OA = 9, CB = 4\sqrt{2}, CD = 4, AB = 3,$
 $OG = 2, r = 1, \omega_{disk} = 24 \text{ c}^{-1}, \alpha = 45^\circ.$

Задача K28.32.

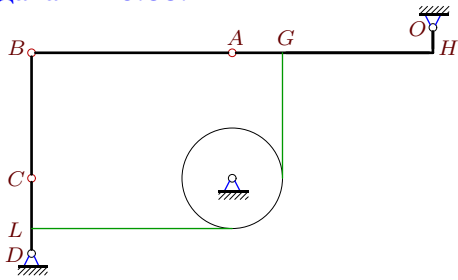
6



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

Задача K28.33.

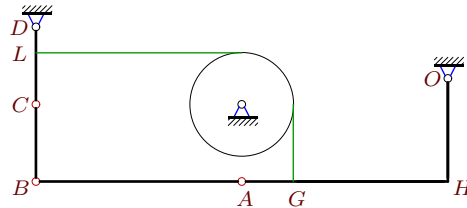
6



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

Задача K28.34.

6



$OH = 4, CB = 3, HA = AB = 8, CD = 3,$
 $r = 2, CL = 2, AG = 2, \omega_{disk} = -9 \text{ c}^{-1}.$

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	-3	12	-7	-1	—
2	-2	8	-7	-1	—
3	-1	4	-3	—	3
4	-3	11	—	-2	6
5	-2	8	—	-1	2
6	-1	5	-2	—	1
7	3	-3	-14	—	-6
8	-10	17	-20	—	5
9	3	—	-26	24	-12
10	-2	4	—	1	1
11	—	13	-10	-3	9
12	-5	13	-10	5	—
13	5	-5	-17	—	-15
14	—	-3	-8	12	-6
15	—	2	-1	1	1
16	1	-1	-1	3	—
17	—	27	-16	-2	6
18	-3	—	-10	3	9
19	5	-5	-11	—	-10
20	—	33	-18	4	12
21	-1	4	—	1	3
22	-6	20	-12	—	12
23	—	11	-9	-2	4
24	-3	10	-8	—	6
25	—	16	-9	3	12
26	-10	14	-40	—	5
27	—	-1	-2	3	-3
28	3	-3	—	18	-9
29	-3	15	-8	2	—
30	-3	—	-8	-2	6
31	-12	44	-27	6	—
32	3	—	2	3	-3
33	—	-5	-19	30	-15
34	3	-3	-14	18	—