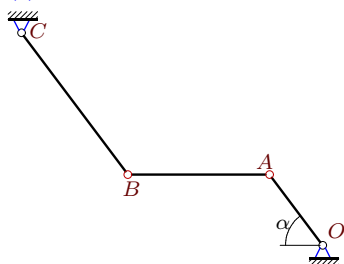


Кинематический анализ механизма. Угловые ускорения

В указанном положении механизма задана постоянная угловая скорость звена OA . Длины звеньев даны в сантиметрах. Звенья, направление которых не указано, принимать вертикальными или горизонтальными. Найти угловые ускорения звеньев AB и BC .

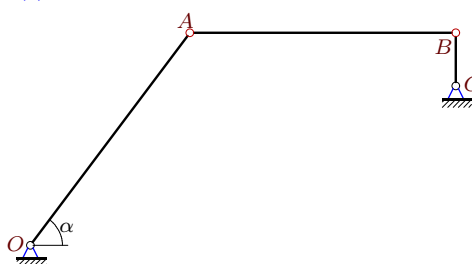
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2002.– 384 с. (с.158.)

Задача 24.1.



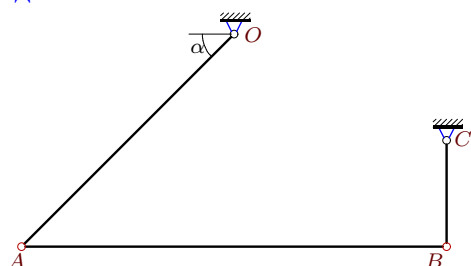
$\omega_{OA} = 16$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 8$, $BC = 10$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.2.



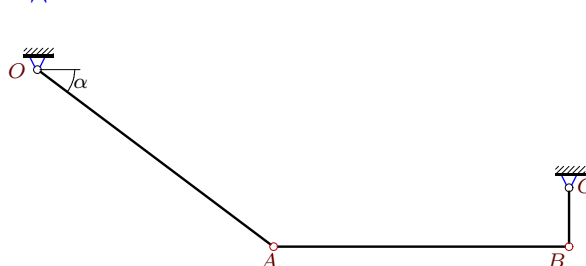
$\omega_{OA} = 5$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 5$, $BC = 1$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.3.



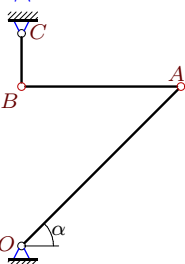
$\omega_{OA} = 4$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.4.



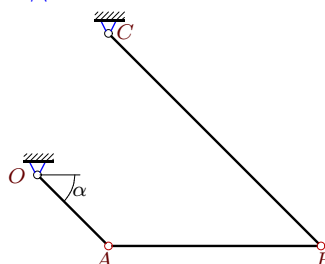
$\omega_{OA} = 5$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 5$, $BC = 1$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.5.



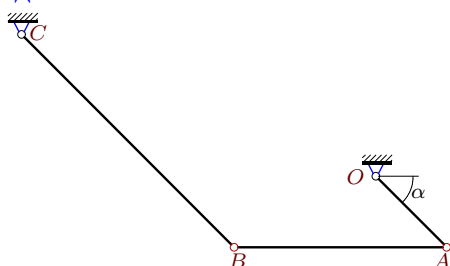
$\omega_{OA} = 3$ рад/с, $AB \perp BC$,
 $OA = 3\sqrt{2}$, $AB = 3$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.6.



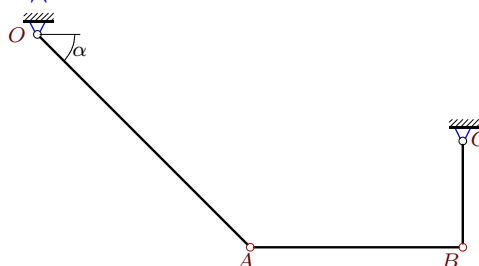
$\omega_{OA} = 45$ рад/с, $OA \parallel BC$,
 $OA = 5\sqrt{2}$, $AB = 15$, $BC = 15\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.7.



$\omega_{OA} = 18$ рад/с, $OA \parallel BC$,
 $OA = 2\sqrt{2}$, $AB = 6$, $BC = 6\sqrt{2}$, $\alpha = \pi/4$.

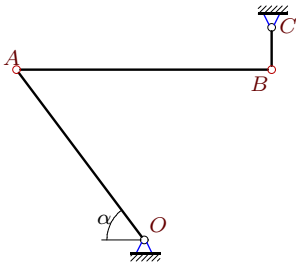
Задача 24.8.



$\omega_{OA} = 2$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 2$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.9.

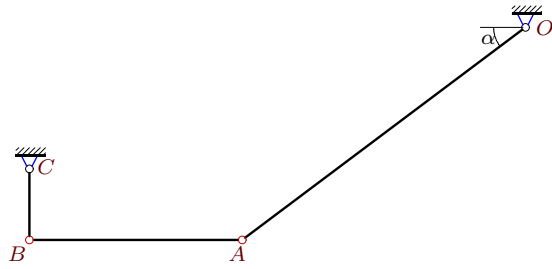
5



$\omega_{OA} = 6$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 6$, $BC = 1$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.10.

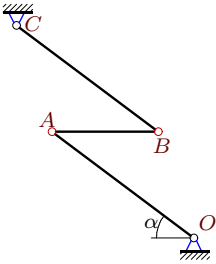
5



$\omega_{OA} = 3$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 3$, $BC = 1$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.11.

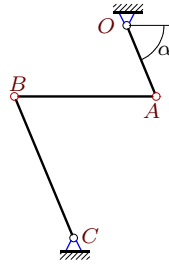
5



$\omega_{OA} = 3$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 3$, $BC = 5$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.12.

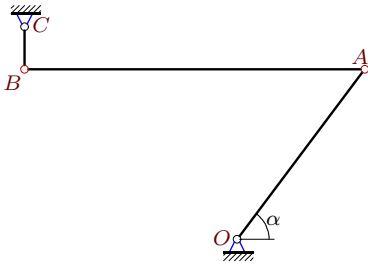
5



$\omega_{OA} = 48$ рад/с, $OA \parallel BC$,
 $OA = 13$, $AB = 24$, $BC = 26$, $\operatorname{tg} \alpha = 12/5$.

Задача 24.13.

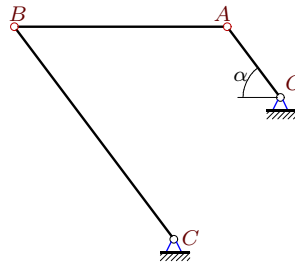
5



$\omega_{OA} = 8$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 8$, $BC = 1$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.14.

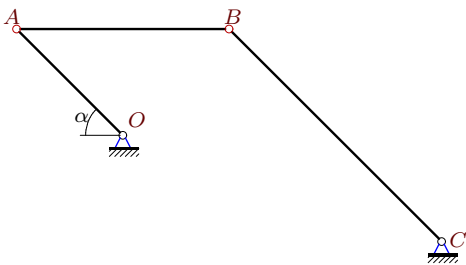
5



$\omega_{OA} = 36$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 12$, $BC = 15$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.15.

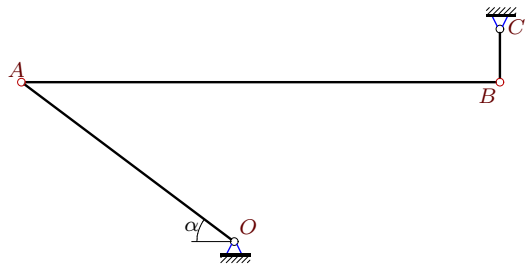
5



$\omega_{OA} = 16$ рад/с, $OA \parallel BC$,
 $OA = 4\sqrt{2}$, $AB = 8$, $BC = 8\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.16.

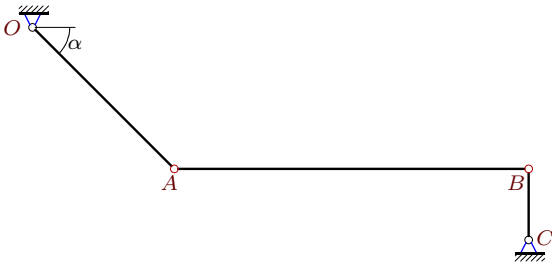
5



$\omega_{OA} = 9$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 9$, $BC = 1$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.17.

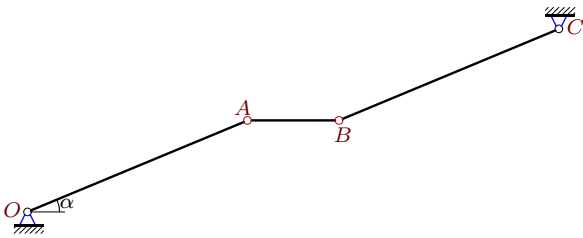
5



$\omega_{OA} = 5$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 5$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.19.

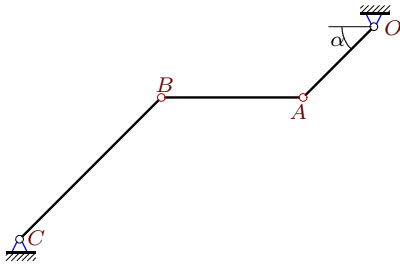
5



$\omega_{OA} = 5$ рад/с, $OA \parallel BC$,
 $OA = 13$, $AB = 5$, $BC = 13$, $\tan \alpha = 5/12$.

Задача 24.21.

5



$\omega_{OA} = 8$ рад/с, $OA \parallel BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 4\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.23.

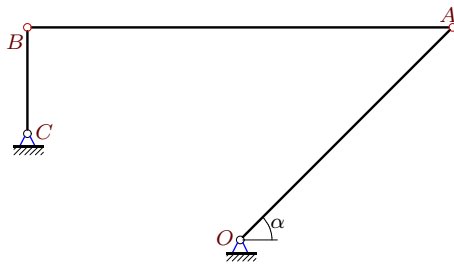
5



$\omega_{OA} = 11$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 11$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.18.

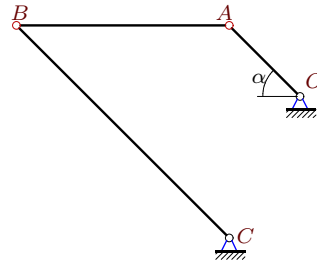
5



$\omega_{OA} = 4$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.20.

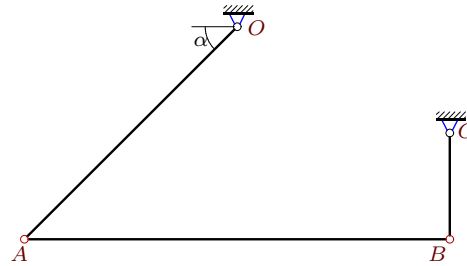
5



$\omega_{OA} = 63$ рад/с, $OA \parallel BC$,
 $OA = 7\sqrt{2}$, $AB = 21$, $BC = 21\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.22.

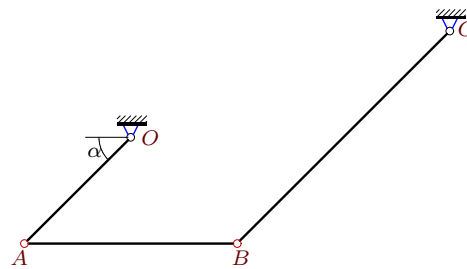
5



$\omega_{OA} = 4$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.24.

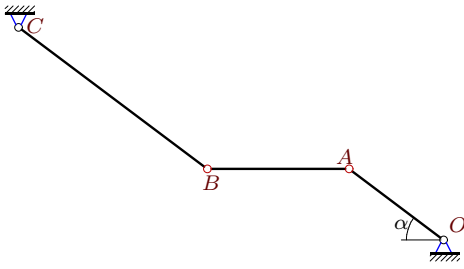
5



$\omega_{OA} = 8$ рад/с, $OA \parallel BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 4\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.25.

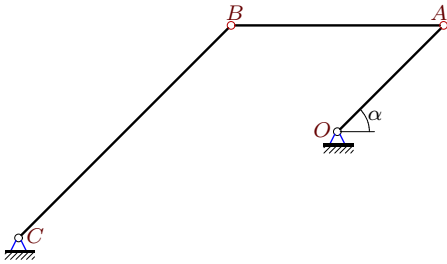
5



$\omega_{OA} = 12$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 6$, $BC = 10$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.27.

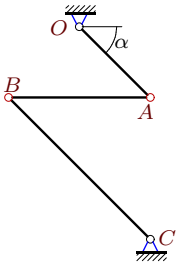
5



$\omega_{OA} = 20$ рад/с, $OA \parallel BC$,
 $OA = 5\sqrt{2}$, $AB = 10$, $BC = 10\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.29.

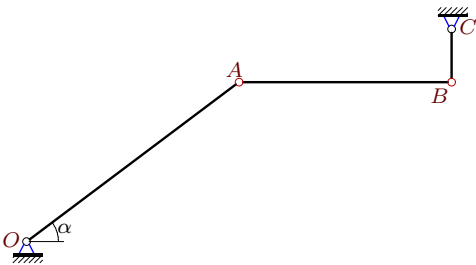
5



$\omega_{OA} = 8$ рад/с, $OA \parallel BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 4\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.31.

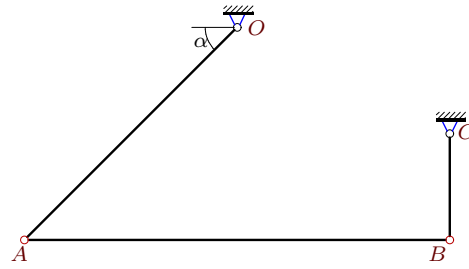
5



$\omega_{OA} = 4$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 4$, $BC = 1$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.26.

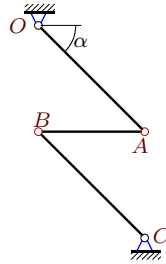
5



$\omega_{OA} = 4$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 4$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.28.

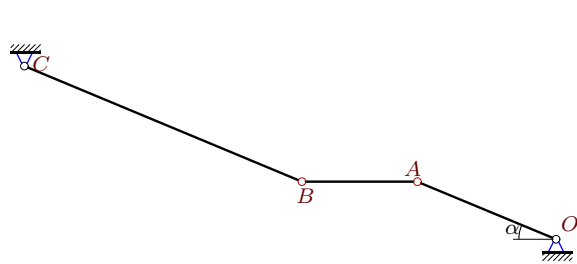
5



$\omega_{OA} = 4$ рад/с, $OA \parallel BC$,
 $OA = 4\sqrt{2}$, $AB = 4$, $BC = 4\sqrt{2}$, $\alpha = \pi/4$.

Задача 24.30.

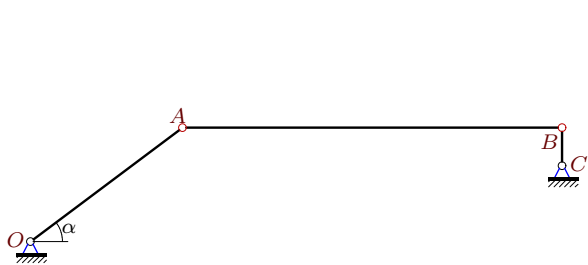
5



$\omega_{OA} = 20$ рад/с, $OA \parallel BC$,
 $OA = 13$, $AB = 10$, $BC = 26$, $\operatorname{tg} \alpha = 5/12$.

Задача 24.32.

5



$\omega_{OA} = 10$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 10$, $BC = 1$, $\operatorname{tg} \alpha = 3/4$.

Кинематический анализ механизма. Угловые ускорения

№	ω_{AB}	ω_{BC}	ε_{AB}	ε_{BC}
1	0	8	300	144
2	3	20	60	120
3	2	8	8	16
4	4	15	30	180
5	3	9	36	0
6	0	15	900	450
7	0	6	144	72
8	2	4	4	16
9	3	24	120	54
10	4	9	18	84
11	0	3	50	24
12	0	24	2028	720
13	3	32	160	120
14	0	12	450	216
15	0	8	128	64
16	4	27	108	180
17	2	10	30	70
18	2	8	8	16
19	0	5	338	120
20	0	21	1764	882
21	0	4	96	48
22	2	8	8	16
23	2	22	66	198
24	0	4	32	16
25	0	6	300	144
26	2	8	8	16
27	0	10	200	100
28	0	4	64	32
29	0	4	96	48
30	0	10	2028	720
31	4	12	48	128
32	4	30	60	560