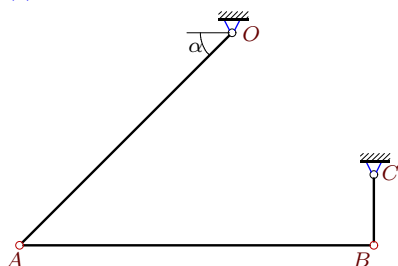


Кинематический анализ механизма. Угловые ускорения

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 .

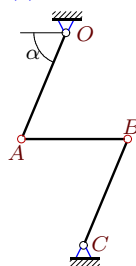
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова. – М.:ФИЗМАТЛИТ, 2002.– 384 с. (с.158.)

Задача 24.1.



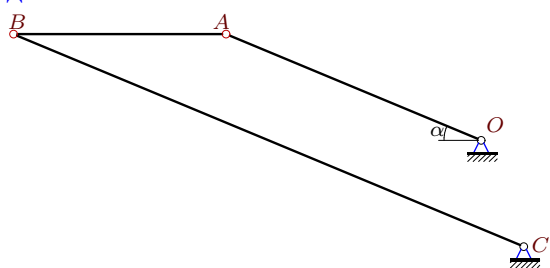
$\omega_{OA} = 5$ рад/с, $AB \perp BC$,
 $OA = 3\sqrt{2}$, $AB = 5$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.2.



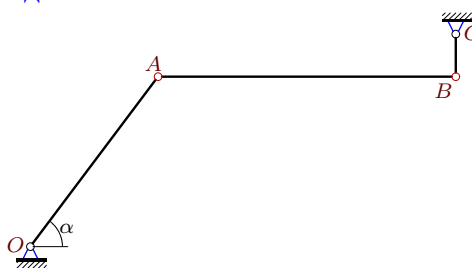
$\omega_{OA} = 12$ рад/с, $OA \parallel BC$,
 $OA = 13$, $AB = 12$, $BC = 13$, $\operatorname{tg} \alpha = 12/5$.

Задача 24.3.



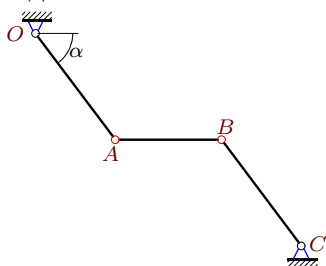
$\omega_{OA} = 20$ рад/с, $OA \parallel BC$,
 $OA = 13$, $AB = 10$, $BC = 26$, $\operatorname{tg} \alpha = 5/12$.

Задача 24.4.



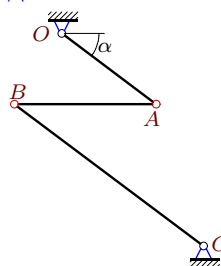
$\omega_{OA} = 7$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 7$, $BC = 1$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.5.



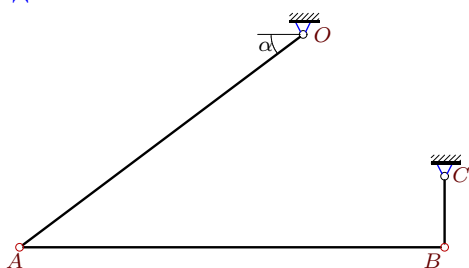
$\omega_{OA} = 4$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 4$, $BC = 5$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.6.



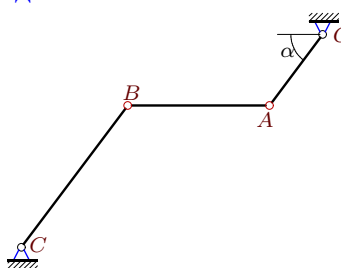
$\omega_{OA} = 12$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 6$, $BC = 10$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.7.



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

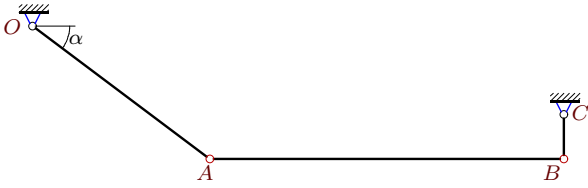
Задача 24.8.



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

Задача 24.9.

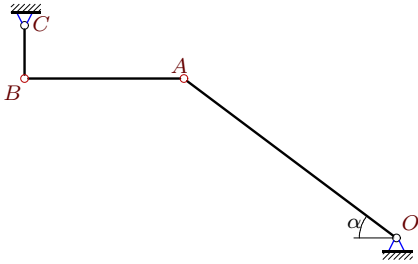
3



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

Задача 24.11.

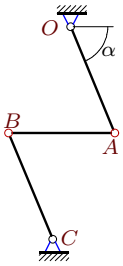
3



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

Задача 24.13.

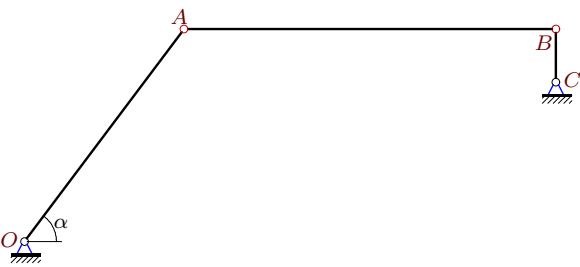
3



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

Задача 24.15.

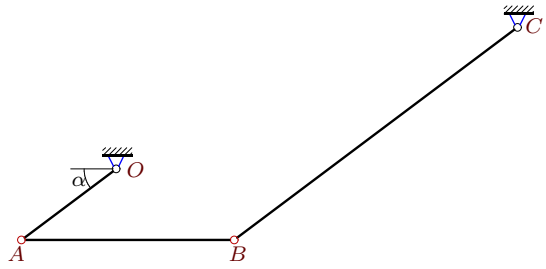
3



$\omega_{OA} = 7$ рад/с, $AB \perp BC$,
 $OA = 5$, $AB = 7$, $BC = 1$, $\operatorname{tg} \alpha = 4/3$.

Задача 24.10.

3



$\omega_{OA} = 27$ рад/с, $OA \parallel BC$,
 $OA = 5$, $AB = 9$, $BC = 15$, $\operatorname{tg} \alpha = 3/4$.

Задача 24.12.

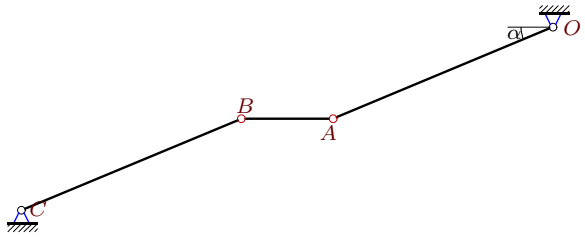
3



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

Задача 24.14.

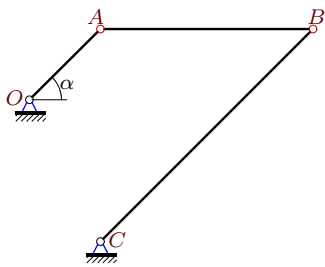
3



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

Задача 24.16.

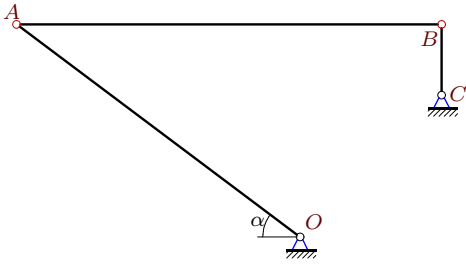
3



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

Задача 24.17.

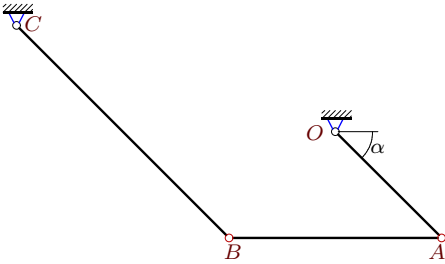
3



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

Задача 24.19.

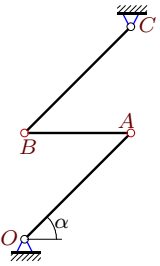
3



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

Задача 24.21.

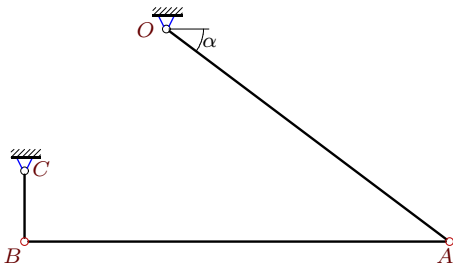
3



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

Задача 24.23.

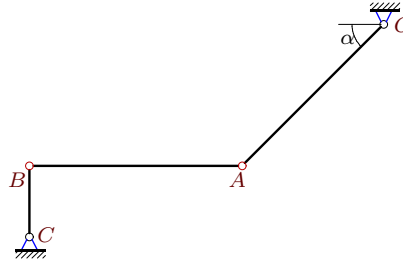
3



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

Задача 24.18.

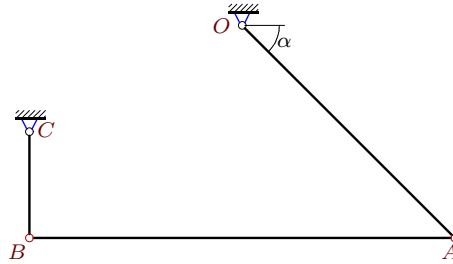
3



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

Задача 24.20.

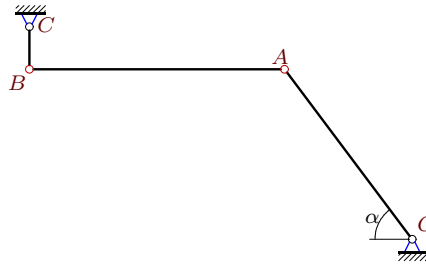
3



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

Задача 24.22.

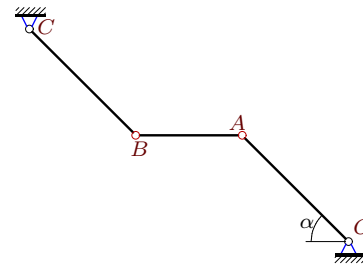
3



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

Задача 24.24.

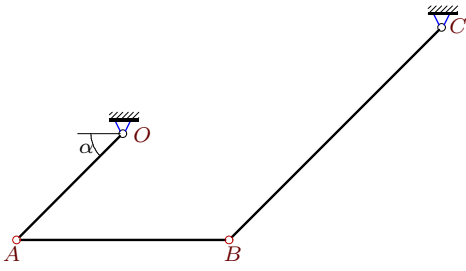
3



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

Задача 24.25.

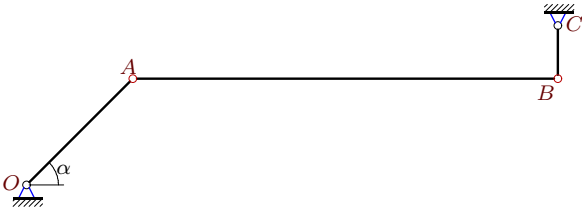
3



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

Задача 24.27.

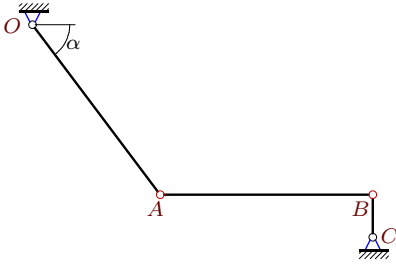
3



$\omega_{OA} = 8$ рад/с, $AB \perp BC$,
 $OA = 2\sqrt{2}$, $AB = 8$, $BC = 1$, $\alpha = \pi/4$.

Задача 24.29.

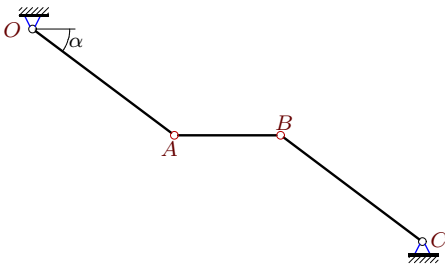
3



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

Задача 24.31.

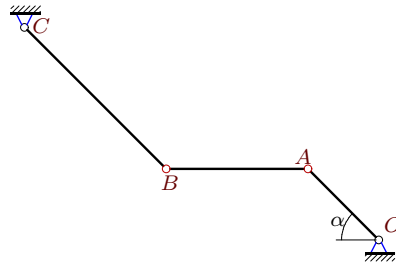
3



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

Задача 24.26.

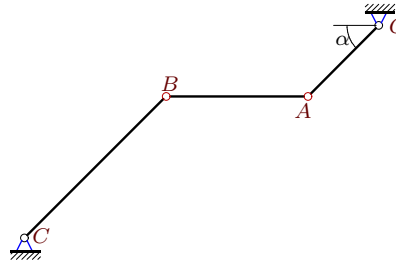
3



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

Задача 24.28.

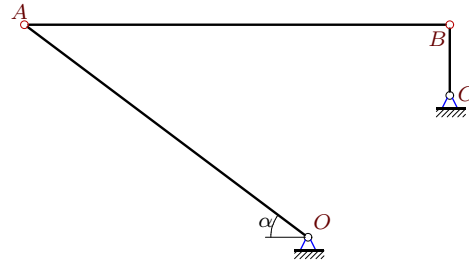
3



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

Задача 24.30.

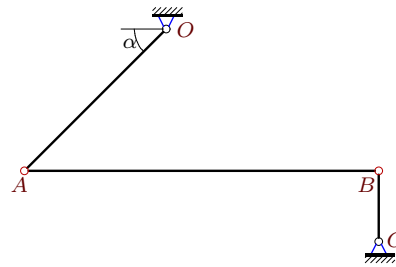
3



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

Задача 24.32.

3



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

Кинематический анализ механизма. Угловые ускорения

№	ω_{AB}	ω_{BC}	ε_{AB}	ε_{BC}
1	3	15	30	30
2	0	12	338	120
3	0	10	676	240
4	3	28	140	210
5	0	4	50	24
6	0	6	300	144
7	4	18	36	48
8	0	8	300	144
9	4	24	48	384
10	0	9	450	216
11	4	9	36	84
12	4	27	54	468
13	0	12	338	120
14	0	5	338	120
15	3	28	84	210
16	0	15	900	450
17	4	18	36	48
18	2	6	18	30
19	0	10	200	100
20	2	8	8	16
21	0	3	36	18
22	3	24	120	162
23	4	18	36	48
24	0	3	36	18
25	0	10	200	100
26	0	4	96	48
27	2	16	48	160
28	0	4	96	48
29	3	20	100	120
30	4	18	36	48
31	0	3	50	24
32	2	10	30	30