

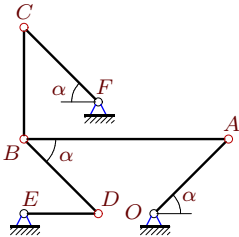
Механизм с двумя степенями свободы

В указанном положении механизма заданы угловые скорости двух его звеньев (с^{-1}). Длины звеньев даны в сантиметрах, $\alpha = 45^\circ$. Стержни, направление которых не указано, считать горизонтальными или вертикальными. Найти угловые скорости всех звеньев механизма.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.— М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.158.)

Задача К-25.101.

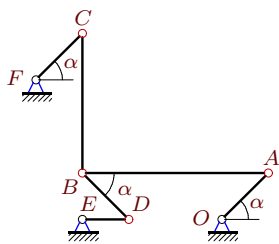
12



$$\omega_{CF_z} = -99, \omega_{DE_z} = 33, AB = 11, BC = 6, \\ DE = 4, OA = CF = BD = 4\sqrt{2}.$$

Задача К-25.102.

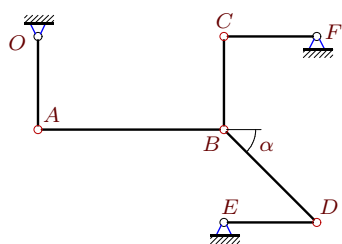
12



$$\omega_{CF_z} = \omega_{DE_z} = 12, AB = 8, BC = 6, DE = 2, OA = CF = BD = 2\sqrt{2}.$$

Задача К-25.103.

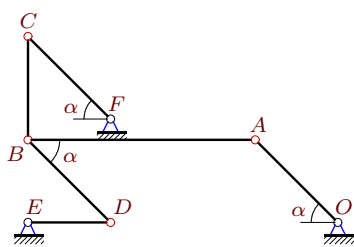
12



$\omega_{OA_z} = -1, \omega_{CF_z} = 2, AB = 8, BC = 4,$
 $DE = 4, OA = 4, CF = 4, BD = 4\sqrt{2}.$

Задача К-25.104.

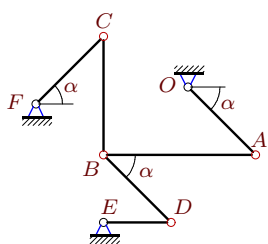
12



$\omega_{OA_z} = -55$, $\omega_{DE_z} = 55$, $AB = 11$, $BC = 5$,
 $DE = 4$, $OA = CF = BD = 4\sqrt{2}$.

Задача К-25.105.

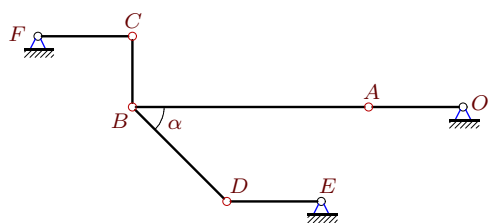
12



$$\omega_{OA_z} = 63, \omega_{CF_z} = 189, AB = 9, BC = 7, \\ DE = 4, OA = CF = BD = 4\sqrt{2}.$$

Задача К-25.106.

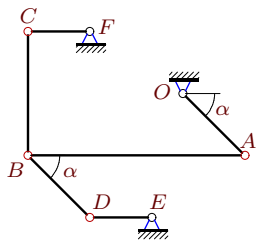
12



$\omega_{OA_z} = -1$, $\omega_{CF_z} = 1$, $AB = 10$, $BC = 3$,
 $DE = 4$, $OA = 4$, $CF = 4$, $BD = 4\sqrt{2}$.

Задача К-25.107.

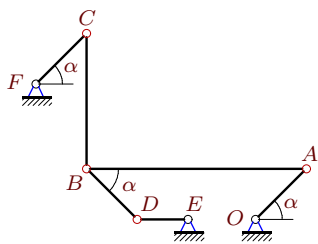
12



$$\omega_{CF_z} = 28, \omega_{DE_z} = -14, AB = 7, BC = 4, \\ DE = 2, CF = 2, OA = BD = 2\sqrt{2}.$$

Задача К-25.108.

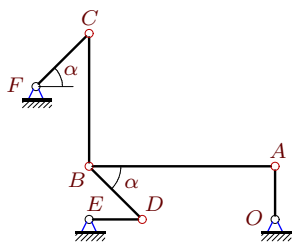
12



$\omega_{OA_z} = 104$, $\omega_{DE_z} = -312$, $AB = 13$, $BC = 8$,
 $DE = 3$, $OA = CF = BD = 3\sqrt{2}$.

Задача К-25.109.

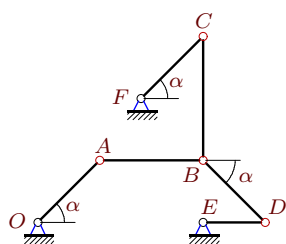
12



$\omega_{OA_z} = 35$, $\omega_{DE_z} = 105$, $AB = 7$, $BC = 5$,
 $DE = 2$, $OA = 2$, $CF = BD = 2\sqrt{2}$.

Задача К-25.110.

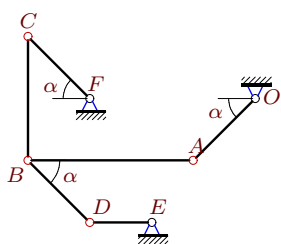
12



$\omega_{OA_z} = -10$, $\omega_{DE_z} = 10$, $AB = 5$, $BC = 6$,
 $DE = 3$, $OA = CF = BD = 3\sqrt{2}$.

Задача К-25.111.

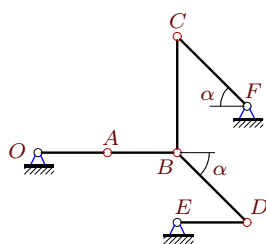
12



$$\omega_{OA_z} = -1, \omega_{DE_z} = -2, AB = 8, BC = 6, \\ DE = 3, OA = CF = BD = 3\sqrt{2}.$$

Задача К-25.112.

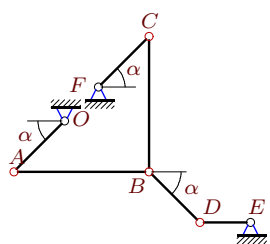
12



$\omega_{OA_z} = \omega_{CF_z} = -5$, $AB = 3$, $BC = 5$,
 $DE = 3$, $OA = 3$, $CF = BD = 3\sqrt{2}$.

Задача К-25.113.

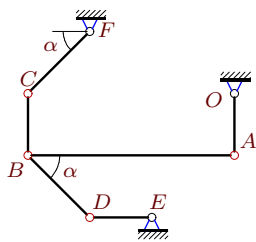
12



$$\omega_{OA_z} = 8, \omega_{CF_z} = -16, AB = BC = 8, DE = 3, \\ OA = CF = BD = 3\sqrt{2}.$$

Задача К-25.114.

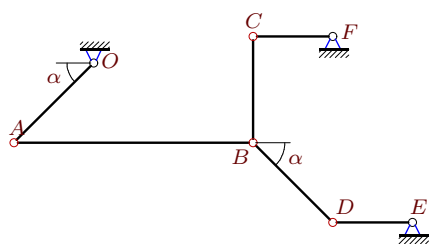
12



$$\omega_{OA_z} = \omega_{DE_z} = -1, \quad AB = 10, \quad BC = 3, \\ DE = 3, \quad OA = 3, \quad CF = BD = 3\sqrt{2}.$$

Задача К-25.115.

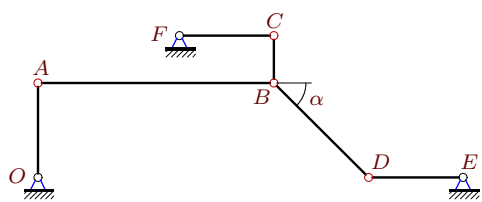
12



$\omega_{OA_z} = 4, \omega_{DE_z} = -4, AB = 9, BC = 4,$
 $DE = 3, CF = 3, OA = BD = 3\sqrt{2}.$

Задача К-25.116.

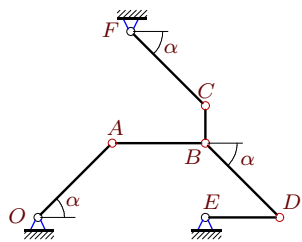
12



$\omega_{OA_z} = -5, \omega_{DE_z} = -15, AB = 10, BC = 2,$
 $DE = 4, OA = 4, CF = 4, BD = 4\sqrt{2}.$

Задача К-25.117.

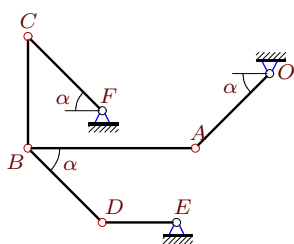
12



$$\omega_{OA_z} = -5, \omega_{CF_z} = -15, AB = 5, BC = 2, \\ DE = 4, OA = CF = BD = 4\sqrt{2}.$$

Задача К-25.118.

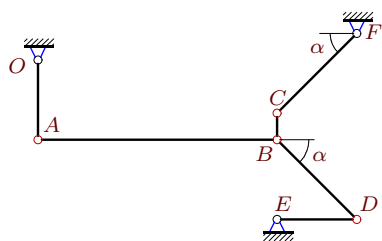
12



$$\omega_{CF_z} = -27, \omega_{DE_z} = -9, AB = 9, BC = 6, \\ DE = 4, OA = CF = BD = 4\sqrt{2}.$$

Задача К-25.119.

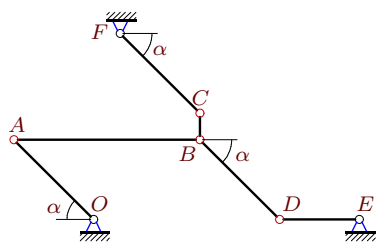
12



$$\omega_{OA_z} = -3, \omega_{CF_z} = -6, AB = 9, BC = 1, \\ DE = 3, OA = 3, CF = BD = 3\sqrt{2}.$$

Задача К-25.120.

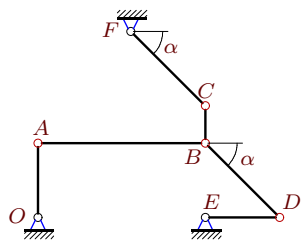
12



$$\omega_{OA_z} = -7, \omega_{DE_z} = 7, AB = 7, BC = 1, \\ DE = 3, OA = CF = BD = 3\sqrt{2}.$$

Задача К-25.121.

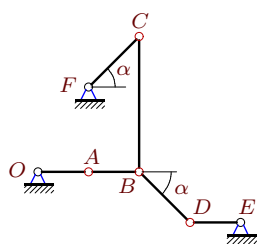
12



$$\omega_{OA_z} = -3, \omega_{CF_z} = -9, AB = 9, BC = 2, \\ DE = 4, OA = 4, CF = BD = 4\sqrt{2}.$$

Задача К-25.122.

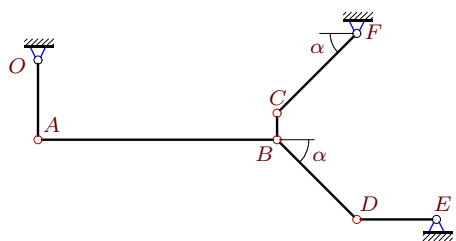
12



$\omega_{OA_z} = 4, \omega_{CF_z} = 8, AB = 3, BC = 8,$
 $DE = 3, OA = 3, CF = BD = 3\sqrt{2}.$

Задача К-25.123.

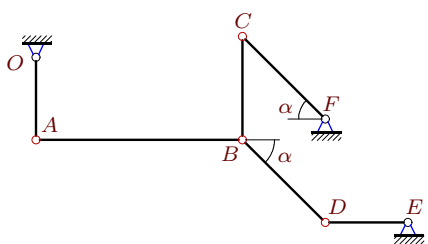
12



$$\omega_{CFz} = \omega_{DEz} = 3, AB = 9, BC = 1, DE = 3, OA = 3, CF = BD = 3\sqrt{2}.$$

Задача К-25.124.

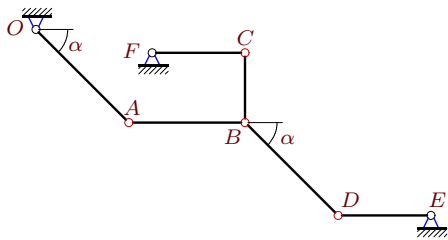
12



$$\omega_{OA_z} = 5, \omega_{CF_z} = 10, AB = 10, BC = 5, \\ DE = 4, OA = 4, CF = BD = 4\sqrt{2}.$$

Задача К-25.125.

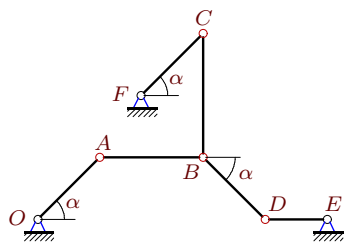
12



$$\omega_{CF_z} = 45, \omega_{DE_z} = 15, AB = 5, BC = 3, \\ DE = 4, CF = 4, OA = BD = 4\sqrt{2}.$$

Задача К-25.126.

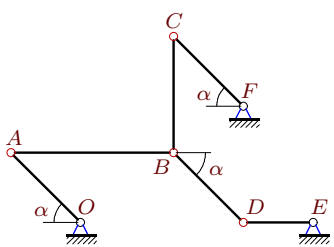
12



$$\omega_{OA_z} = -2, \omega_{DE_z} = -6, AB = 5, BC = 6, \\ DE = 3, OA = CF = BD = 3\sqrt{2}.$$

Задача К-25.127.

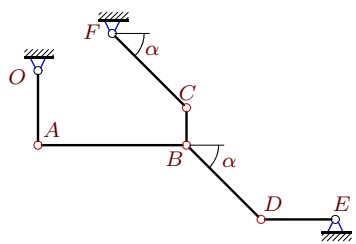
12



$\omega_{OA_z} = 35$, $\omega_{DE_z} = -70$, $AB = 7$, $BC = 5$,
 $DE = 3$, $OA = CF = BD = 3\sqrt{2}$.

Задача К-25.128.

12



$$\omega_{CF_z} = -2, \omega_{DE_z} = 2, AB = 8, BC = 2, \\ DE = 4, OA = 4, CF = BD = 4\sqrt{2}.$$

Ответы.**Механизм с двумя степенями свободы**

12.05.2015

№	ω_{OA}	ω_{AB}	ω_{BC}	ω_{FC}	ω_{DB}	ω_{DE}
101	-66	-60	-22	-	-66	-
102	0	-3	4	-	0	-
103	-	-1	-1	-	1	-1
104	-	-20	-44	-110	-55	-
105	-	-56	144	-	-63	126
106	-	0	0	-	0	-1
107	-42	-4	-21	-	42	-
108	-	-24	39	208	104	-
109	-	-20	14	70	35	-
110	-	18	15	20	-10	-
111	-	0	-1	-1	1	-
112	-	10	-3	-	0	5
113	-	-3	-3	-	-8	24
114	-	0	-1	0	1	-
115	-	4	3	-8	-4	-
116	-	8	10	20	-5	-
117	-	-8	40	-	-5	-20
118	18	-20	-6	-	-18	-
119	-	2	9	-	3	9
120	-	-3	21	0	-7	-
121	-	-4	24	-	-3	-12
122	-	4	3	-	0	-8
123	0	-1	-9	-	0	-
124	-	-4	12	-	-5	15
125	60	-12	80	-	-60	-
126	-	6	5	8	-2	-
127	-	30	-42	-35	35	-
128	0	-1	4	-	0	-

К-25 файл о25к12А