

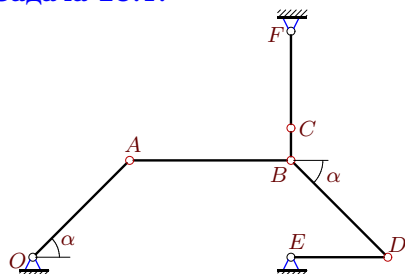
Механизм с двумя степенями свободы

В указанном положении механизма заданы угловые скорости двух его звеньев. Длины звеньев даны в сантиметрах. Стержни, направление которых не указано, считать горизонтальными или вертикальными. Найти угловые скорости всех звеньев механизма.

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

Задача 25.1.

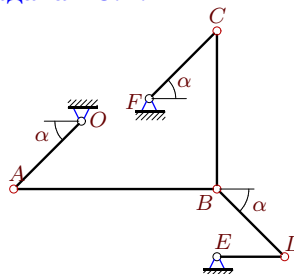
Аксенов Юрий



$$\omega_{CF_z} = -10\frac{1}{c}, \omega_{DE_z} = -5\frac{1}{c}, AB = 5, BC = 1, DE = 3, CF = 3, OA = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.2.

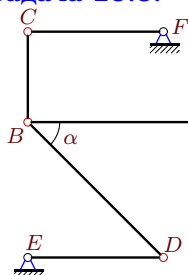
Бондаренко В.



$$\omega_{OA_z} = -21\frac{1}{c}, \omega_{CF_z} = -63\frac{1}{c}, AB = 9, BC = 7, DE = 3, OA = CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.3.

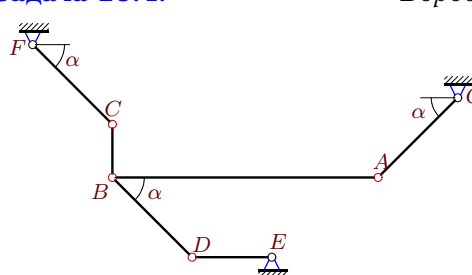
Бублей Александр



$$\omega_{OA_z} = \omega_{CF_z} = 6\frac{1}{c}, AB = 9, BC = 2, DE = 3, OA = 3, CF = 3, BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.4.

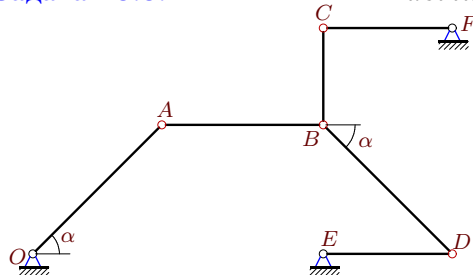
Воробьев Кирилл



$$\omega_{OA_z} = 1\frac{1}{c}, \omega_{DE_z} = 2\frac{1}{c}, AB = 10, BC = 2, DE = 3, OA = CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.5.

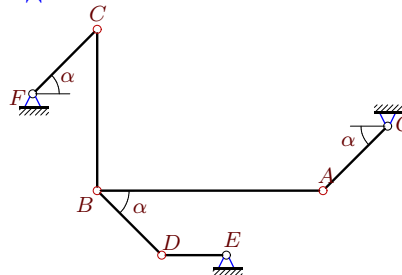
Гаджиев Джамал



$$\omega_{CF_z} = \omega_{DE_z} = -15\frac{1}{c}, AB = 5, BC = 3, DE = 4, CF = 4, OA = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.6.

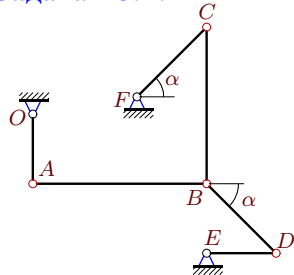
Грицай Виктор



$$\omega_{OA_z} = \omega_{DE_z} = 35\frac{1}{c}, AB = 7, BC = 5, DE = 2, OA = CF = BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.7.

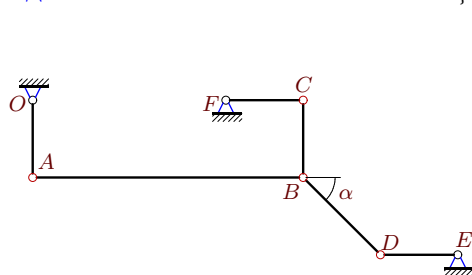
Желябовская Юлия



$$\omega_{OA_z} = -45\frac{1}{c}, \omega_{CF_z} = -135\frac{1}{c}, AB = 10, BC = 9, DE = 4, OA = 4, CF = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.8.

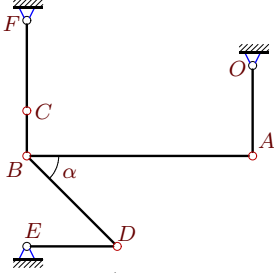
Зайцева Евгения



$$\omega_{OA_z} = -7\frac{1}{c}, \omega_{DE_z} = 7\frac{1}{c}, AB = 7, BC = 2, DE = 2, OA = 2, CF = 2, BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.9.

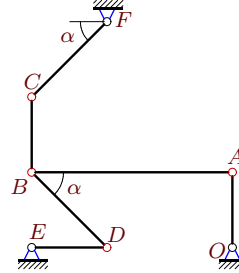
Колесник Анастасия



$$\omega_{OA_z} = 1 \frac{1}{c}, \omega_{CF_z} = -2 \frac{1}{c}, AB = 10, BC = 2, DE = 4, OA = 4, CF = 4, BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.10.

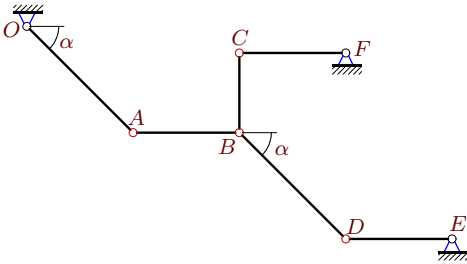
Костюков Дмитрий



$$\omega_{CF_z} = -8 \frac{1}{c}, \omega_{DE_z} = 4 \frac{1}{c}, AB = 8, BC = 3, DE = 3, OA = 3, CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.11.

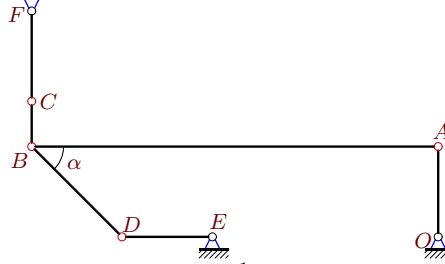
Коротеев Александр



$$\omega_{CF_z} = 9 \frac{1}{c}, \omega_{DE_z} = 3 \frac{1}{c}, AB = 4, BC = 3, DE = 4, CF = 4, OA = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.12.

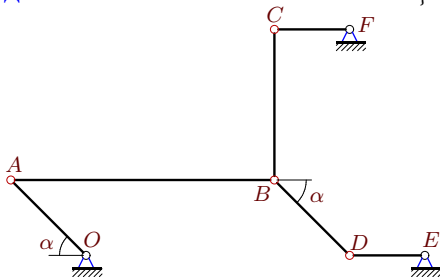
Котенко Вячеслав



$$\omega_{OA_z} = \omega_{CF_z} = -1 \frac{1}{c}, AB = 9, BC = 1, DE = 2, OA = 2, CF = 2, BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.13.

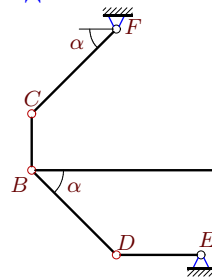
Мальцев Александр



$$\omega_{OA_z} = 14 \frac{1}{c}, \omega_{DE_z} = 28 \frac{1}{c}, AB = 7, BC = 4, DE = 2, CF = 2, OA = BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.14.

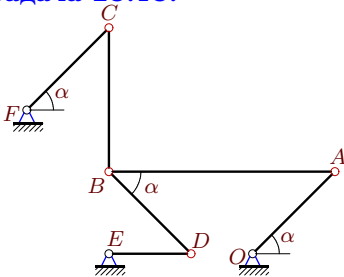
Настаева Зухра



$$\omega_{OA_z} = -8 \frac{1}{c}, \omega_{DE_z} = -16 \frac{1}{c}, AB = 8, BC = 2, DE = 3, OA = 3, CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.15.

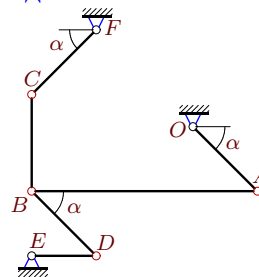
Светлов Вадим



$$\omega_{CF_z} = 231 \frac{1}{c}, \omega_{DE_z} = 77 \frac{1}{c}, AB = 11, BC = 7, DE = 4, OA = CF = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.16.

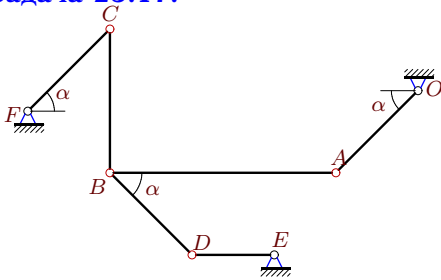
Смирнова Анастасия



$$\omega_{OA_z} = 7 \frac{1}{c}, \omega_{CF_z} = -14 \frac{1}{c}, AB = 7, BC = 3, DE = 2, OA = CF = BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.17.

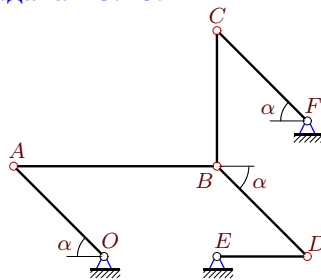
Степин Илья



$$\omega_{OA_z} = 77\frac{1}{c}, \omega_{DE_z} = -77\frac{1}{c}, AB = 11, BC = 7, DE = 4, OA = CF = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.18.

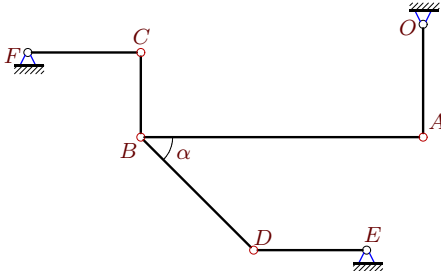
Цвирко Федор



$$\omega_{OA_z} = 3\frac{1}{c}, \omega_{DE_z} = 9\frac{1}{c}, AB = 9, BC = 6, DE = 4, OA = CF = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.19.

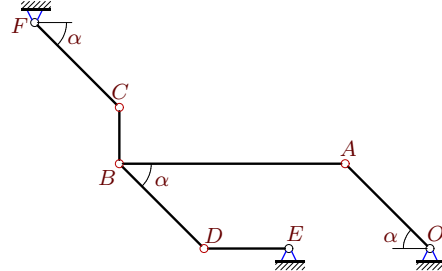
Ченцов Максим



$$\omega_{CF_z} = -10\frac{1}{c}, \omega_{DE_z} = -5\frac{1}{c}, AB = 10, BC = 3, DE = 4, OA = 4, CF = 4, BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.20.

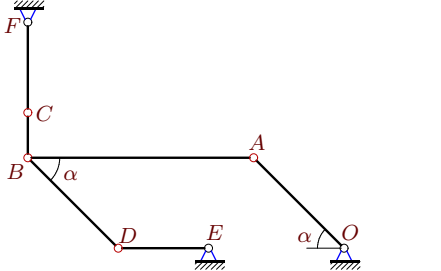
Чигидина Лиза



$$\omega_{OA_z} = 8\frac{1}{c}, \omega_{DE_z} = 24\frac{1}{c}, AB = 8, BC = 2, DE = 3, OA = CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.21.

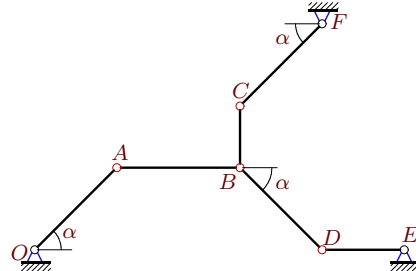
Шабан Михаил



$$\omega_{CF_z} = 15\frac{1}{c}, \omega_{DE_z} = 5\frac{1}{c}, AB = 10, BC = 2, DE = 4, CF = 4, OA = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.22.

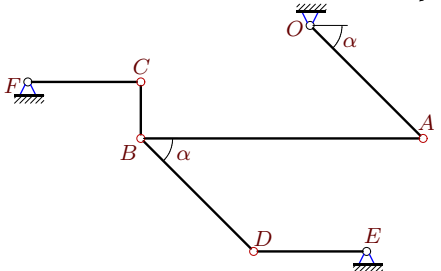
Шевцов Никита



$$\omega_{CF_z} = -2\frac{1}{c}, \omega_{DE_z} = -1\frac{1}{c}, AB = 6, BC = 3, DE = 4, OA = CF = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.23.

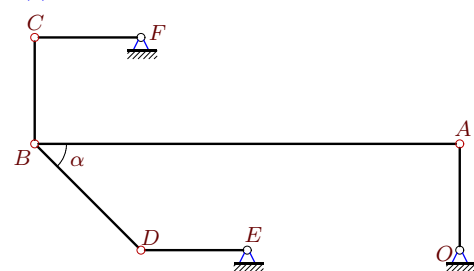
Шимарова Светлана



$$\omega_{OA_z} = -5\frac{1}{c}, \omega_{CF_z} = 10\frac{1}{c}, AB = 10, BC = 2, DE = 4, CF = 4, OA = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.24.

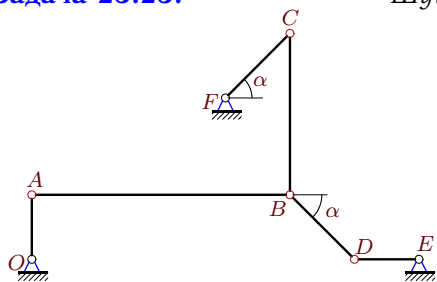
Шинкина Анна



$$\omega_{OA_z} = -1\frac{1}{c}, \omega_{DE_z} = -3\frac{1}{c}, AB = 8, BC = 2, DE = 2, OA = 2, CF = 2, BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.25.

Шуйчиков Артем



$\omega_{CFz} = -4\frac{1}{c}$, $\omega_{DEz} = -2\frac{1}{c}$, $AB = 8$, $BC = 5$,
 $DE = 2$, $OA = 2$, $CF = BD = 2\sqrt{2}$, $\alpha = 45^\circ$.

Механизм с двумя степенями свободы

№	ω_{OA}	ω_{AB}	ω_{BC}	ω_{FC}	ω_{DB}	ω_{DE}	
1	-5	3	45	-	-5	-	Аксенов Юрий
2	-	-28	-36	-	21	-42	Бондаренко В.
3	-	2	-9	-	6	0	Бублей Александр
4	-	0	3	-1	-1	-	Воробьев Кирилл
5	-30	36	40	-	-30	-	Гаджиев Джамал
6	-	-10	14	0	-35	-	Грицай Виктор
7	-	-54	-80	-	45	-90	Желябовская Юлия
8	-	-4	-7	-14	7	-	Зайцева Евгения
9	-	0	6	-	-1	-1	Колесник Анастасия
10	-4	-3	12	-	-4	-	Костюков Дмитрий
11	-6	-3	-8	-	6	-	Коротеев Александр
12	-	0	4	-	-1	1	Котенко Вячеслав
13	-	-8	-7	42	14	-	Мальцев Александр
14	-	-3	0	-8	8	-	Настаева Зухра
15	-154	-140	220	-	-154	-	Светлов Вадим
16	-	-2	14	-	-7	7	Смирнова Анастасия
17	-	-84	132	154	-77	-	Степин Илья
18	-	4	-6	-6	3	-	Цвирко Федор
19	-15	4	-20	-	15	-	Ченцов Максим
20	-	9	36	-32	8	-	Чигидина Лиза
21	-5	2	-20	-	-5	-	Шабан Михаил
22	-1	2	4	-	-1	-	Шевцов Никита
23	-	-6	-10	-	5	-15	Шимарова Светлана
24	-	-1	1	-4	-1	-	Шинкина Анна
25	6	-1	-4	-	6	-	Шуйчиков Артем