

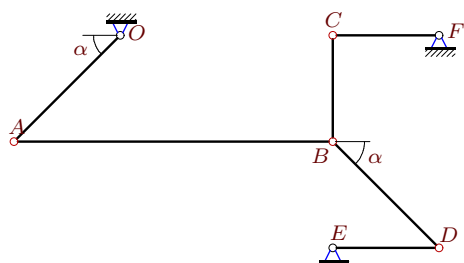
Механизм с двумя степенями свободы

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.

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

Задача 25.1.

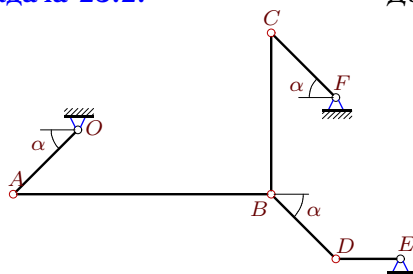
Буйнажев Евгений



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

Задача 25.2.

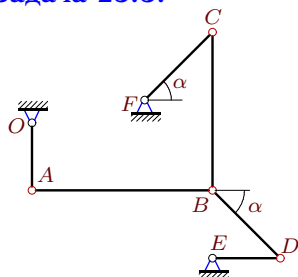
Дзядевич Игорь



$$\omega_{OA_z} = 20 \frac{1}{c}, \quad \omega_{DE_z} = -20 \frac{1}{c}, \quad AB = 8, \quad BC = 5, \\ DE = 2, \quad OA = CF = BD = 2\sqrt{2}, \quad \alpha = 45^\circ.$$

Задача 25.3.

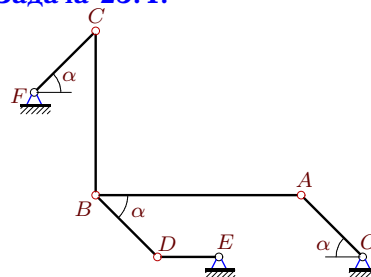
Еремин Илья



$$\omega_{OA_z} = -28 \frac{1}{c}, \quad \omega_{CF_z} = -56 \frac{1}{c}, \quad AB = 8, \quad BC = 7, \\ DE = 3, \quad OA = 3, \quad CF = BD = 3\sqrt{2}, \quad \alpha = 45^\circ.$$

Задача 25.4.

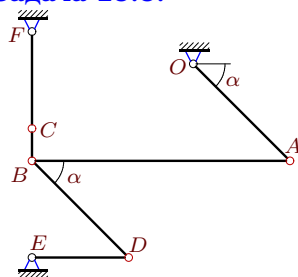
Есопов Вячеслав



$$\omega_{CF_z} = -40 \frac{1}{c}, \quad \omega_{DE_z} = 40 \frac{1}{c}, \quad AB = 10, \quad BC = 8, \\ DE = 3, \quad OA = CF = BD = 3\sqrt{2}, \quad \alpha = 45^\circ.$$

Задача 25.5.

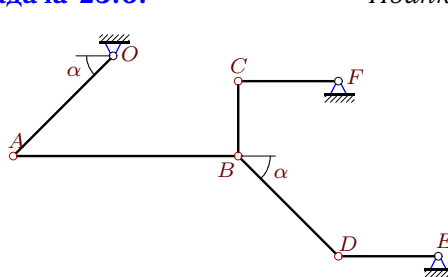
Захарченко Николай



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

Задача 25.6.

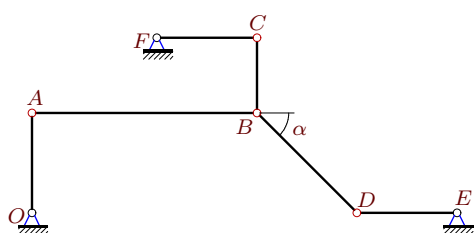
Иванков Никита



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

Задача 25.7.

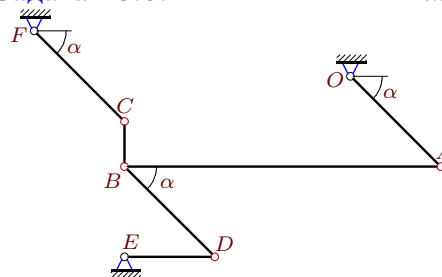
Мелкумян Сурен



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

Задача 25.8.

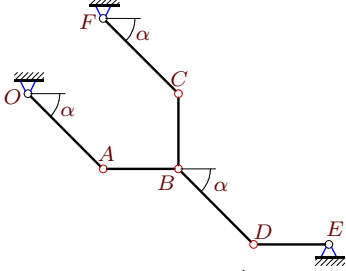
Михайлов Игорь



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

Задача 25.9.

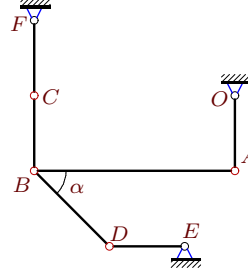
Никольский Павел



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

Задача 25.10.

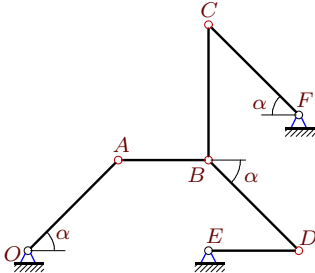
Примеров Андрей



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

Задача 25.11.

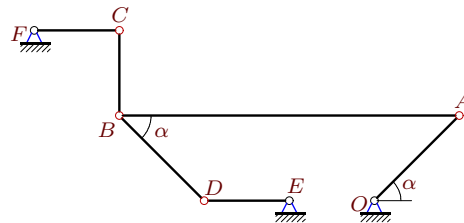
Соловьев Тимофей



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

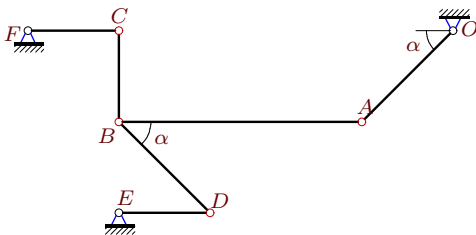
Задача 25.12.

Яблокова Марина



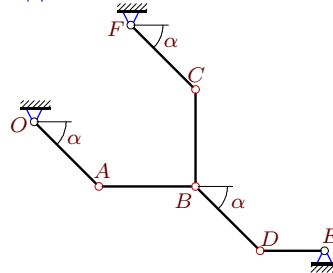
$\omega_{CF_z} = 8\frac{1}{c}$, $\omega_{DE_z} = 4\frac{1}{c}$, $AB = 12$, $BC = 3$,
 $DE = 3$, $CF = 3$, $OA = BD = 3\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.13.



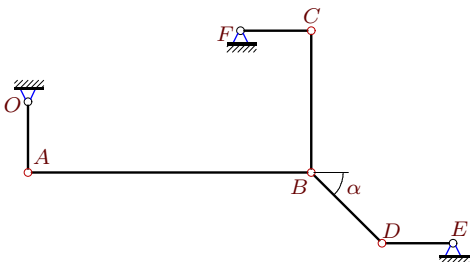
$\omega_{OA_z} = 8\frac{1}{c}$, $\omega_{DE_z} = -24\frac{1}{c}$, $AB = 8$, $BC = 3$,
 $DE = 3$, $CF = 3$, $OA = BD = 3\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.14.



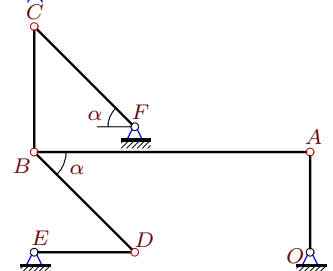
$\omega_{CF_z} = 6\frac{1}{c}$, $\omega_{DE_z} = 3\frac{1}{c}$, $AB = 3$, $BC = 3$,
 $DE = 2$, $OA = CF = BD = 2\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.15.



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

Задача 25.16.



$\omega_{OA_z} = -55\frac{1}{c}$, $\omega_{DE_z} = 165\frac{1}{c}$, $AB = 11$, $BC = 5$,
 $DE = 4$, $OA = 4$, $CF = BD = 4\sqrt{2}$, $\alpha = 45^\circ$.