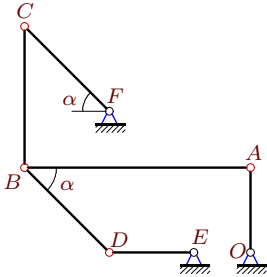


Механизм с двумя степенями свободы

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.

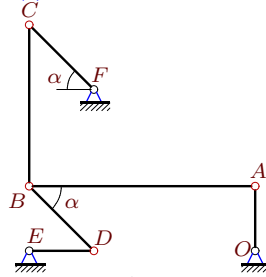
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.:ФИЗМАТЛИТ, 2008.– 384 с. (с.158.)

Задача 25.1. *Бирюков Алексей*



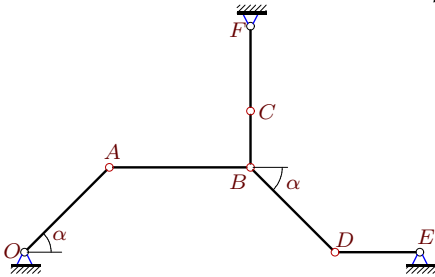
$$\omega_{OA_z} = -40\frac{1}{c}, \omega_{DE_z} = 80\frac{1}{c}, AB = 8, BC = 5, DE = 3, OA = 3, CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.2. *Дементьев Максим*



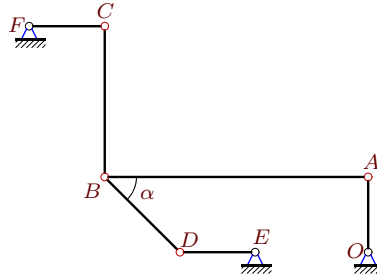
$$\omega_{OA_z} = 35\frac{1}{c}, \omega_{CF_z} = -35\frac{1}{c}, AB = 7, BC = 5, DE = 2, OA = 2, CF = BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.3. *Жирнов Михаил*



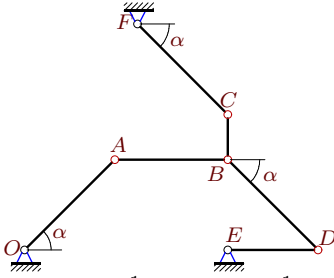
$$\omega_{CF_z} = 15\frac{1}{c}, \omega_{DE_z} = -5\frac{1}{c}, AB = 5, BC = 2, DE = 3, CF = 3, OA = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.4. *Зайцев Станислав*



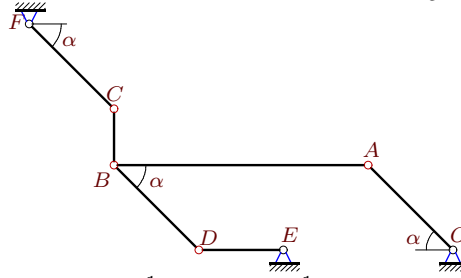
$$\omega_{OA_z} = \omega_{CF_z} = -14\frac{1}{c}, AB = 7, BC = 4, DE = 2, OA = 2, CF = 2, BD = 2\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.5. *Крахмалева Ольга*



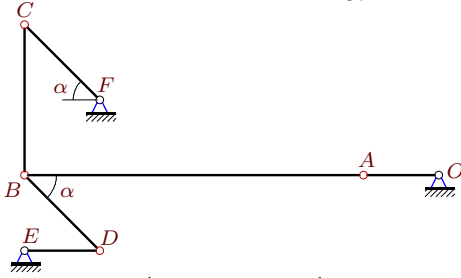
$$\omega_{OA_z} = -5\frac{1}{c}, \omega_{CF_z} = 5\frac{1}{c}, AB = 5, BC = 2, DE = 4, OA = CF = BD = 4\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.6. *Куваков Роман*



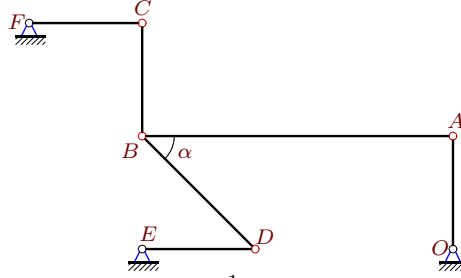
$$\omega_{CF_z} = -12\frac{1}{c}, \omega_{DE_z} = 6\frac{1}{c}, AB = 9, BC = 2, DE = 3, OA = CF = BD = 3\sqrt{2}, \alpha = 45^\circ.$$

Задача 25.7. *Куриленко Александр*



$$\omega_{OA_z} = -18\frac{1}{c}, \omega_{DE_z} = 54\frac{1}{c}, AB = 9, BC = 4, DE = 2, OA = 2, CF = BD = 2\sqrt{2}, \alpha = 45^\circ.$$

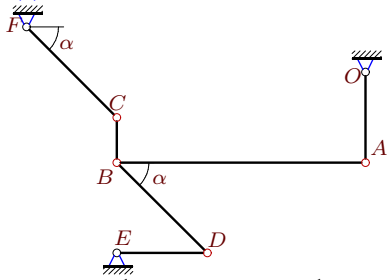
Задача 25.8. *Липская Анна*



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

Задача 25.9.

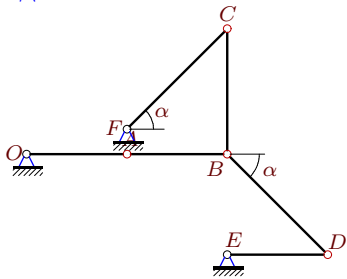
Лукина Анна



$\omega_{CF_z} = 22\frac{1}{c}$, $\omega_{DE_z} = -11\frac{1}{c}$, $AB = 11$, $BC = 2$,
 $DE = 4$, $OA = 4$, $CF = BD = 4\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.11.

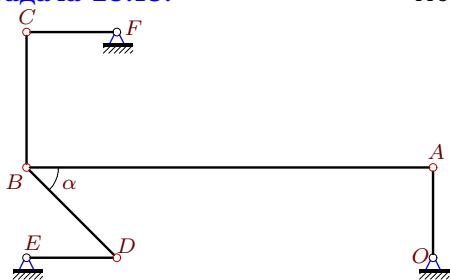
Мальцев Роман



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

Задача 25.13.

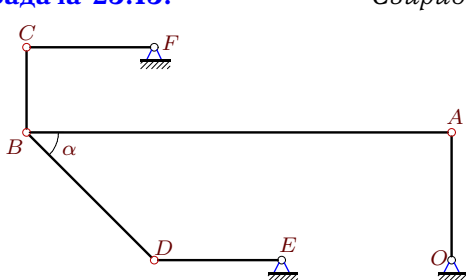
Похин Виктор



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

Задача 25.15.

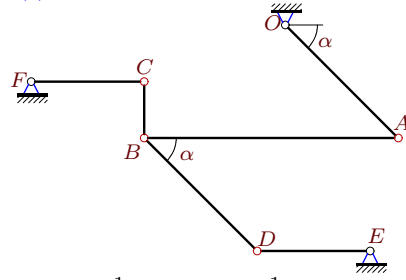
Свиридов Михаил



$\omega_{CF_z} = -20\frac{1}{c}$, $\omega_{DE_z} = 10\frac{1}{c}$, $AB = 10$, $BC = 2$,
 $DE = 3$, $OA = 3$, $CF = 3$, $BD = 3\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.10.

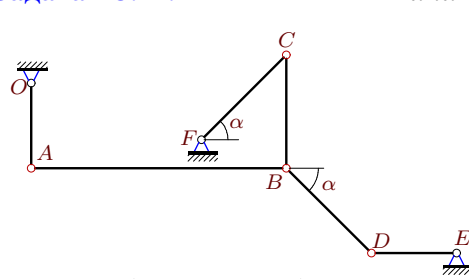
Майданюк Михаил



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

Задача 25.12.

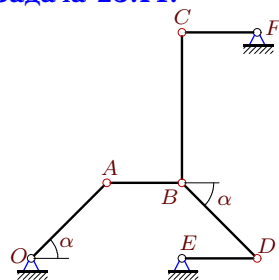
Никитина Ольга



$\omega_{OA_z} = 12\frac{1}{c}$, $\omega_{CF_z} = 24\frac{1}{c}$, $AB = 9$, $BC = 4$,
 $DE = 3$, $OA = 3$, $CF = BD = 3\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.14.

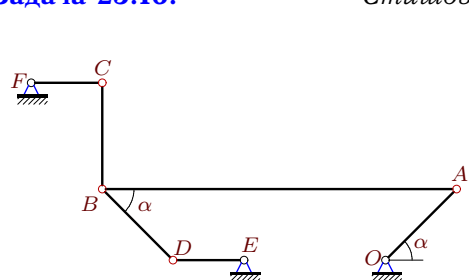
Рягузов Александр



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

Задача 25.16.

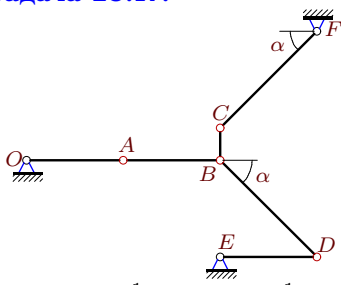
Стишов Владимир



$\omega_{OA_z} = 15\frac{1}{c}$, $\omega_{DE_z} = -45\frac{1}{c}$, $AB = 10$, $BC = 3$,
 $DE = 2$, $CF = 2$, $OA = BD = 2\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.17.

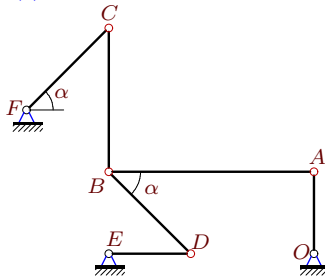
Тимофеев Евгений



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

Задача 25.19.

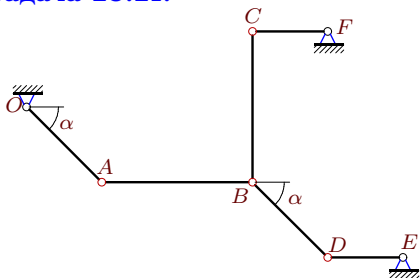
Фролова Евгения



$\omega_{CF_z} = -70\frac{1}{c}$, $\omega_{DE_z} = 35\frac{1}{c}$, $AB = 10$, $BC = 7$,
 $DE = 4$, $OA = 4$, $CF = BD = 4\sqrt{2}$, $\alpha = 45^\circ$.

Задача 25.21.

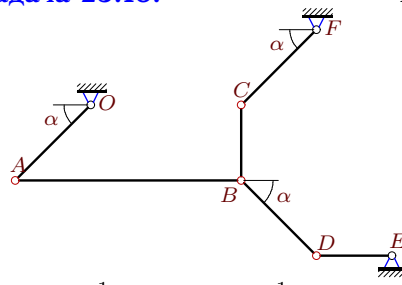
Власов Артем



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

Задача 25.18.

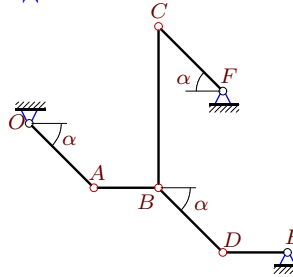
Титкова Ольга



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

Задача 25.20.

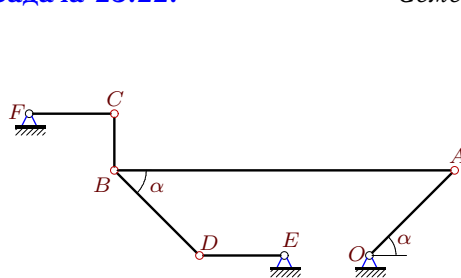
Шенин Илья



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

Задача 25.22.

Семенов Максим



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