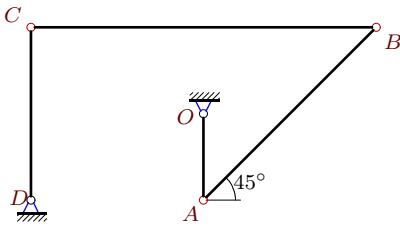


Уравнение трех угловых ускорений. Две степени свободы

В указанном положении механизма заданы угловые скорости (с^{-1}) и ускорения (с^{-2}) двух звеньев. Длины звеньев даны в сантиметрах. Звенья, направление которых не указано, принимать вертикальными или горизонтальными. Найти угловые ускорения звеньев механизма.

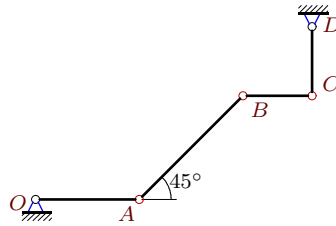
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова. – М.: ФИЗМАТЛИТ, 2008. – 384 с. (с.183.)

Задача К-20.1. Аленичкин Александр



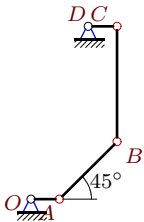
$$\begin{aligned} \omega_{OAz} &= -8, \quad \omega_{CDz} = 16, \\ \varepsilon_{OAz} &= -16, \quad \varepsilon_{BCz} = 36, \\ OA &= 1, \quad AB = 2\sqrt{2}, \quad BC = 4, \quad CD = 2. \end{aligned}$$

Задача К-20.2. Белый Алексей



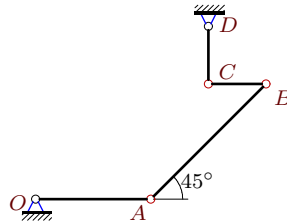
$$\begin{aligned} \omega_{OAz} &= 6, \quad \omega_{CDz} = -12, \\ \varepsilon_{BCz} &= 807, \quad \varepsilon_{CDz} = -6, \\ OA &= 3, \quad AB = 3\sqrt{2}, \quad BC = CD = 2. \end{aligned}$$

Задача К-20.3. Бирюков Антон



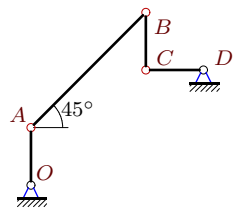
$$\begin{aligned} \omega_{OAz} &= -8, \quad \omega_{BCz} = 0, \\ \varepsilon_{BCz} &= -4, \quad \varepsilon_{CDz} = 0, \\ OA &= CD = 1, \quad AB = 2\sqrt{2}, \quad BC = 4. \end{aligned}$$

Задача К-20.4. Боржов Роман



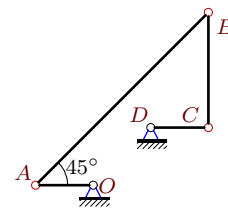
$$\begin{aligned} \omega_{BCz} &= -4, \quad \omega_{CDz} = 0, \\ \varepsilon_{OAz} &= -2, \quad \varepsilon_{BCz} = 6, \\ OA &= 2, \quad AB = 2\sqrt{2}, \quad BC = CD = 1. \end{aligned}$$

Задача К-20.5. Галустов Владимир



$$\begin{aligned} \omega_{OAz} &= 2, \quad \omega_{CDz} = -2, \\ \varepsilon_{OAz} &= -2, \quad \varepsilon_{BCz} = -10, \\ OA &= 1, \quad AB = 2\sqrt{2}, \quad BC = CD = 1. \end{aligned}$$

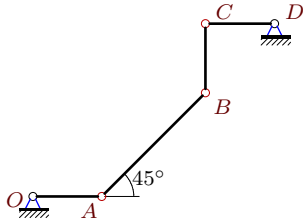
Задача К-20.6. Дмитриева Марина



$$\begin{aligned} \omega_{OAz} &= 6, \quad \omega_{BCz} = 3, \\ \varepsilon_{BCz} &= -15, \quad \varepsilon_{CDz} = 6, \\ OA &= CD = 1, \quad AB = 3\sqrt{2}, \quad BC = 2. \end{aligned}$$

Задача К-20.7.

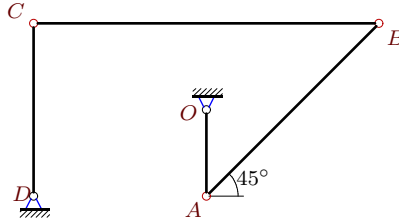
Ельникова Ирина



$$\begin{aligned} \omega_{OAz} &= -6, \quad \omega_{BCz} = -18, \\ \varepsilon_{OAz} &= -6, \quad \varepsilon_{BCz} = -936, \\ OA &= 2, \quad AB = 3\sqrt{2}, \quad BC = CD = 2. \end{aligned}$$

Задача К-20.8.

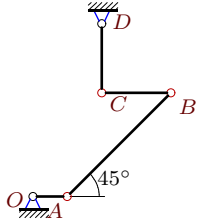
Кильдиватова Полина



$$\begin{aligned} \omega_{BCz} &= 6, \quad \omega_{CDz} = 16, \\ \varepsilon_{OAz} &= -8, \quad \varepsilon_{BCz} = 34, \\ OA &= 1, \quad AB = 2\sqrt{2}, \quad BC = 4, \quad CD = 2. \end{aligned}$$

Задача К-20.9.

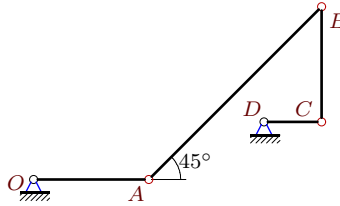
Кильчанов Сергей



$$\begin{aligned} \omega_{BCz} &= 9, \quad \omega_{CDz} = -12, \\ \varepsilon_{BCz} &= -267, \quad \varepsilon_{CDz} = -6, \\ OA &= 1, \quad AB = 3\sqrt{2}, \quad BC = CD = 2. \end{aligned}$$

Задача К-20.10.

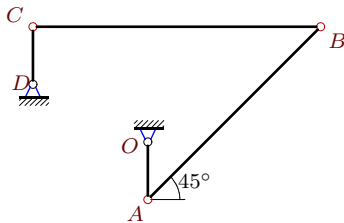
Коннов Сергей



$$\begin{aligned} \omega_{OAz} &= 6, \quad \omega_{BCz} = -6, \\ \varepsilon_{OAz} &= \varepsilon_{CDz} = 6, \\ OA &= BC = 2, \quad AB = 3\sqrt{2}, \quad CD = 1. \end{aligned}$$

Задача К-20.11.

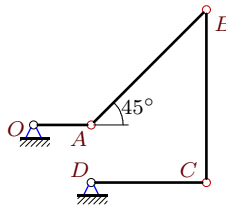
Красненко Дарья



$$\begin{aligned} \omega_{OAz} &= -15, \quad \omega_{CDz} = 15, \\ \varepsilon_{OAz} &= 15, \quad \varepsilon_{BCz} = 93, \\ OA &= CD = 1, \quad AB = 3\sqrt{2}, \quad BC = 5. \end{aligned}$$

Задача К-20.12.

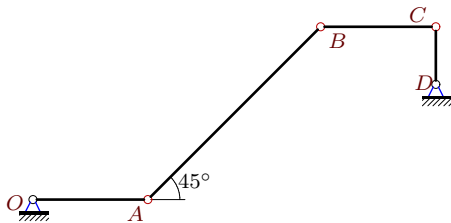
Крупинин Андрей



$$\begin{aligned} \omega_{OAz} &= 6, \quad \omega_{CDz} = 0, \\ \varepsilon_{OAz} &= 0, \quad \varepsilon_{BCz} = 28, \\ OA &= 1, \quad AB = 2\sqrt{2}, \quad BC = 3, \quad CD = 2. \end{aligned}$$

Задача К-20.13.

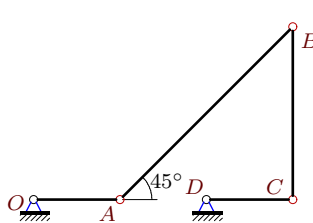
Миргасов Алексей



$$\begin{aligned} \omega_{OAz} &= 6, \quad \omega_{CDz} = 0, \\ \varepsilon_{BCz} &= 63, \quad \varepsilon_{CDz} = 6, \\ OA &= BC = 2, \quad AB = 3\sqrt{2}, \quad CD = 1. \end{aligned}$$

Задача К-20.14.

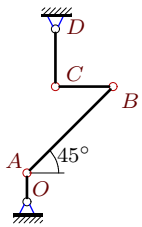
Миронова Дарья



$$\begin{aligned} \omega_{OAz} &= 4, \quad \omega_{BCz} = -2, \\ \varepsilon_{BCz} &= 8, \quad \varepsilon_{CDz} = 4, \\ OA &= CD = 1, \quad AB = 2\sqrt{2}, \quad BC = 2. \end{aligned}$$

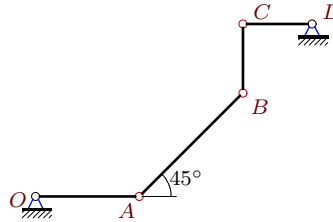
Задача К-20.15.

Набиев Артур



$$\begin{aligned} \omega_{OAz} &= -6, \quad \omega_{BCz} = -9, \\ \varepsilon_{OAz} &= 6, \quad \varepsilon_{CDz} = 0, \\ OA &= 1, \quad AB = 3\sqrt{2}, \quad BC = CD = 2. \end{aligned}$$

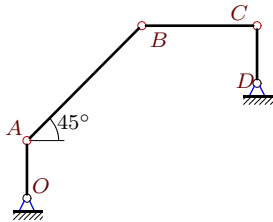
Задача К-20.16. *Назаренко Анастасия*



$$\begin{aligned} \omega_{OAz} &= -6, \quad \omega_{BCz} = 3, \\ \varepsilon_{BCz} &= -249, \quad \varepsilon_{CDz} = -12, \\ OA &= 3, \quad AB = 3\sqrt{2}, \quad BC = CD = 2. \end{aligned}$$

Задача К-20.17.

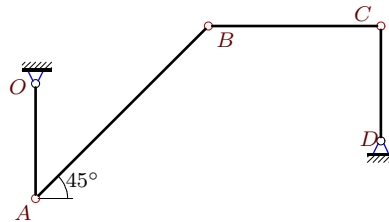
Ни Владислав



$$\begin{aligned} \omega_{OAz} &= \omega_{CDz} = 4, \\ \varepsilon_{OAz} &= -4, \quad \varepsilon_{BCz} = 0, \\ OA &= CD = 1, \quad AB = 2\sqrt{2}, \quad BC = 2. \end{aligned}$$

Задача К-20.18.

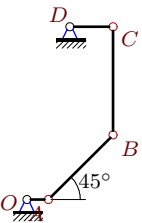
Сергеев Михаил



$$\begin{aligned} \omega_{OAz} &= 9, \quad \omega_{BCz} = -18, \\ \varepsilon_{BCz} &= 702, \quad \varepsilon_{CDz} = -9, \\ OA &= CD = 2, \quad AB = 3\sqrt{2}, \quad BC = 3. \end{aligned}$$

Задача К-20.19.

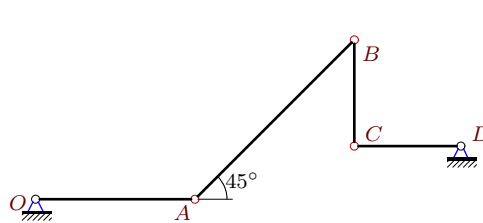
Скляренок Никита



$$\begin{aligned} \omega_{BCz} &= -3, \quad \omega_{CDz} = 0, \\ \varepsilon_{BCz} &= -78, \quad \varepsilon_{CDz} = -30, \\ OA &= 1, \quad AB = 3\sqrt{2}, \quad BC = 5, \quad CD = 2. \end{aligned}$$

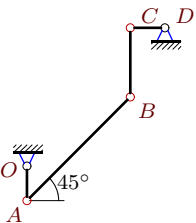
Задача К-20.20.

Филатов Иван



$$\begin{aligned} \omega_{BCz} &= -21, \quad \omega_{CDz} = 12, \\ \varepsilon_{OAz} &= 12, \quad \varepsilon_{CDz} = 0, \\ OA &= 3, \quad AB = 3\sqrt{2}, \quad BC = CD = 2. \end{aligned}$$

Задача К-20.21. *Шеповаленко Ангелина*



$$\begin{aligned} \omega_{OAz} &= \omega_{BCz} = -6, \\ \varepsilon_{OAz} &= 0, \quad \varepsilon_{CDz} = -6, \\ OA &= CD = 1, \quad AB = 3\sqrt{2}, \quad BC = 2. \end{aligned}$$