

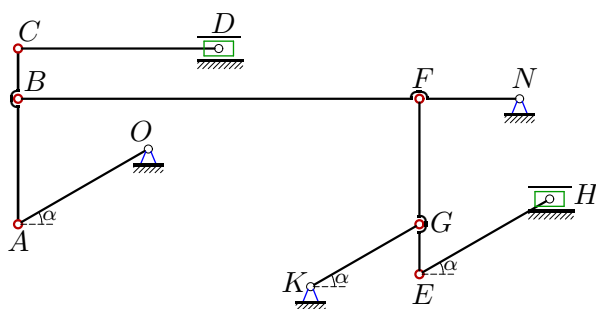
Кинематический анализ механизма (7 звеньев)

Плоский многозвенный механизм с одной степенью свободы приводится в движение кривошипом, который вращается против часовой стрелки с постоянной угловой скоростью. Найти скорости всех шарниров. Размеры даны в сантиметрах.

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

Задача 9.1.

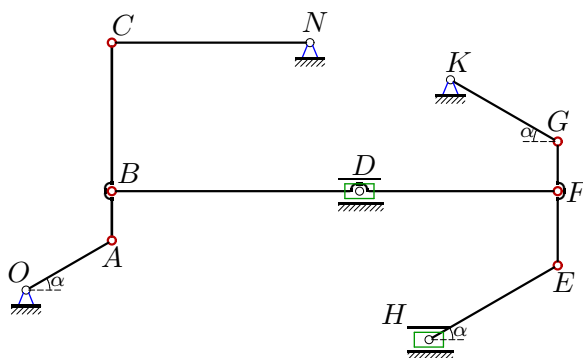
Антонов Вадим Эдуардович



$$\begin{aligned} \omega_{OA} &= 1 \text{ рад/с}, \alpha = 30^\circ, \\ AB &= 25, BC = 10, \\ BF &= 80, NF = 20, \\ CD &= 40, EH = 30, \\ FG &= 25, GE = 10, \\ OA &= 30, KG = 25. \end{aligned}$$

Задача 9.2.

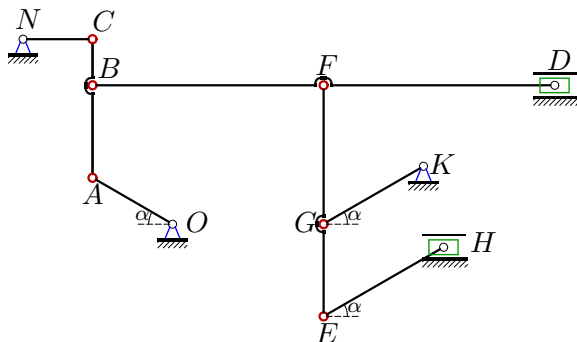
Бондарев Александр Игоревич



$$\begin{aligned} \omega_{NC} &= 4 \text{ рад/с}, \alpha = 30^\circ, \\ AB &= 10, BC = 30, \\ DB &= 50, DF = 40, \\ NC &= 40, EH = 30, \\ FE &= 15, FG = 10, \\ OA &= 20, KG = 25. \end{aligned}$$

Задача 9.3.

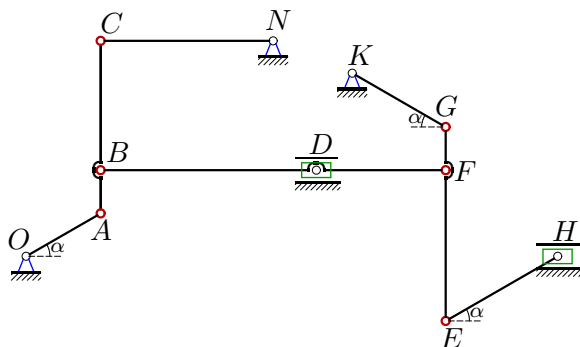
Бугакова Анна Геннадьевна



$$\begin{aligned} \omega_{NC} &= 3 \text{ рад/с}, \alpha = 30^\circ, \\ AB &= 20, BC = 10, \\ BF &= 50, FD = 50, \\ NC &= 15, EH = 30, \\ FE &= 50, FG = 30, \\ OA &= 20, KG = 25. \end{aligned}$$

Задача 9.4.

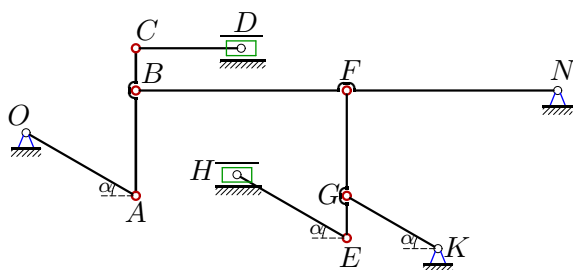
Быков Михаил Алексеевич



$\omega_{OA} = 4$ рад/с, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $DB = 50$, $DF = 30$,
 $NC = 40$, $EH = 30$,
 $FE = 35$, $FG = 10$,
 $OA = 20$, $KG = 25$.

Задача 9.5.

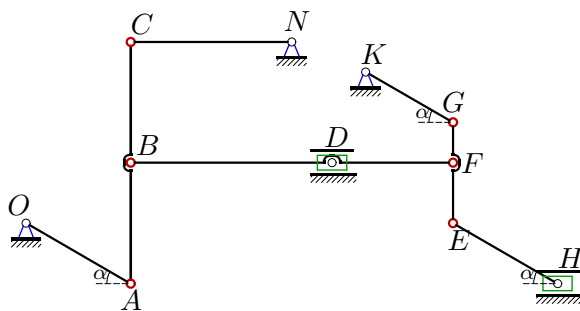
Васильцов Иван Дмитриевич



$\omega_{NB} = 2$ рад/с, $\alpha = 30^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 50$, $NF = 50$,
 $CD = 25$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 30$, $KG = 25$.

Задача 9.6.

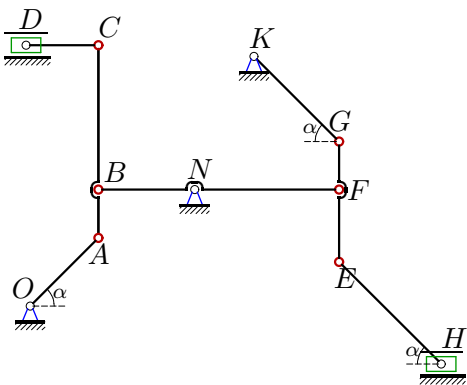
Володин Илья Сергеевич



$\omega_{OA} = 4$ рад/с, $\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $DB = 50$, $DF = 30$,
 $NC = 40$, $EH = 30$,
 $FE = 15$, $FG = 10$,
 $OA = 30$, $KG = 25$.

Задача 9.7.

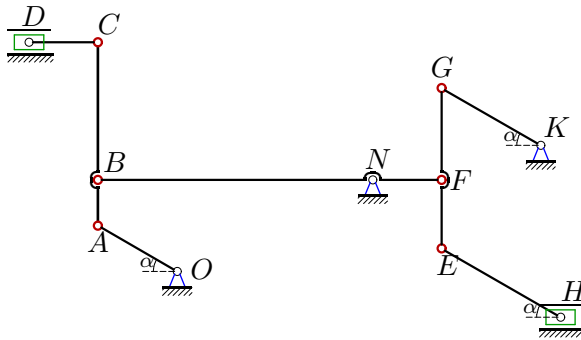
Галкин Антон Дмитриевич



$\omega_{KG} = 1$ рад/с, $\alpha = 45^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 20$, $NF = 30$,
 $CD = 15$, $EH = 30$,
 $FE = 15$, $FG = 10$,
 $OA = 20$, $KG = 25$.

Задача 9.8.

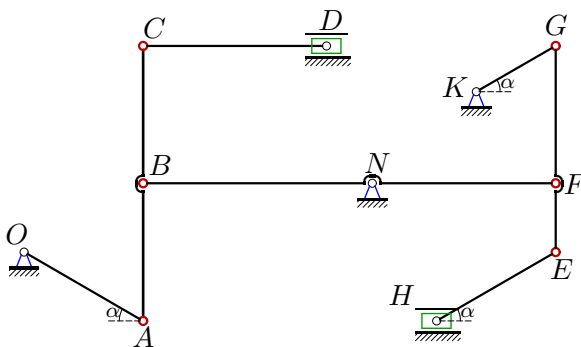
Голубев Ростислав Александрович



$\omega_{OA} = 1$ рад/с, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 60$, $NF = 15$,
 $CD = 15$, $EH = 30$,
 $FE = 15$, $FG = 20$,
 $OA = 20$, $KG = 25$.

Задача 9.9.

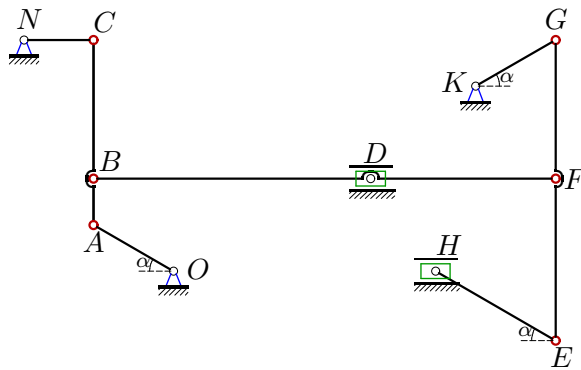
Демин Руслан Олегович



$\omega_{BF} = 4$ рад/с, $\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $NB = 50$, $NF = 40$,
 $CD = 40$, $EH = 30$,
 $FE = 15$, $FG = 30$,
 $OA = 30$, $KG = 20$.

Задача 9.10.

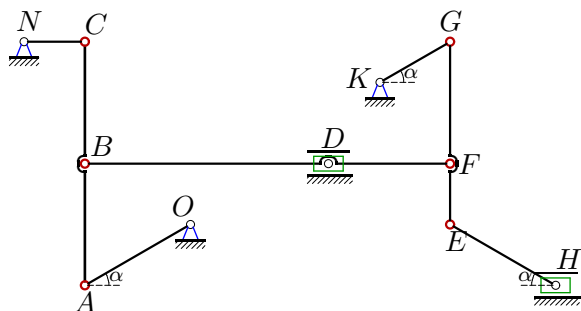
Зайцев Григорий Сергеевич



$\omega_{OA} = 2$ рад/с, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $DB = 60$, $DF = 40$,
 $NC = 15$, $EH = 30$,
 $FE = 35$, $FG = 30$,
 $OA = 20$, $KG = 20$.

Задача 9.11.

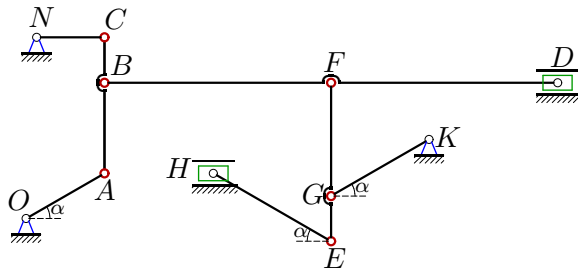
Зеболова Анна Сергеевна



$\omega_{NC} = 3$ рад/с, $\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $DB = 60$, $DF = 30$,
 $NC = 15$, $EH = 30$,
 $FE = 15$, $FG = 30$,
 $OA = 30$, $KG = 20$.

Задача 9.12.

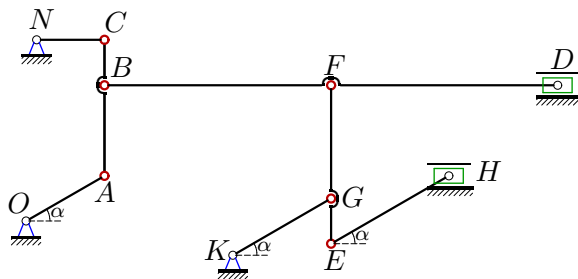
Зубков Дмитрий Юрьевич



$\omega_{NC} = 3 \text{ рад/с}, \alpha = 30^\circ,$
 $AB = 20, BC = 10,$
 $BF = 50, FD = 50,$
 $NC = 15, EH = 30,$
 $FE = 35, FG = 25,$
 $OA = 20, KG = 25.$

Задача 9.13.

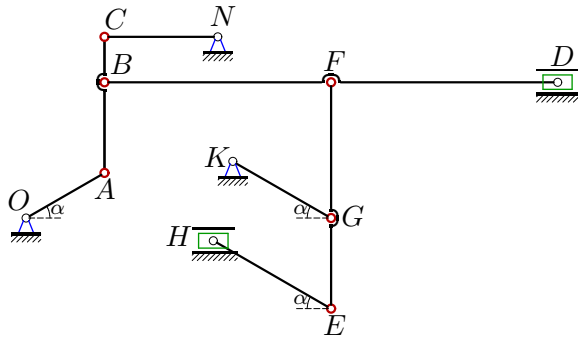
Короткова Юлия Александровна



$\omega_{NC} = 4 \text{ рад/с}, \alpha = 30^\circ,$
 $AB = 20, BC = 10,$
 $BF = 50, FD = 50,$
 $NC = 15, EH = 30,$
 $FE = 35, FG = 25,$
 $OA = 20, KG = 25.$

Задача 9.14.

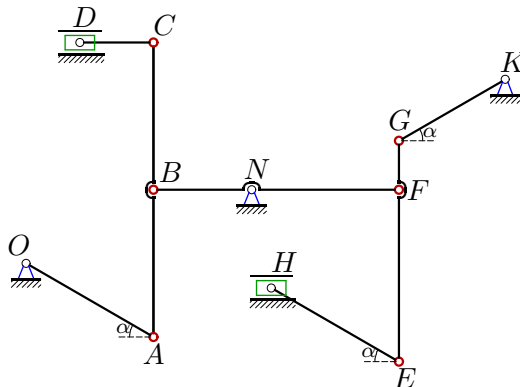
Краюшкин Сергей Константинович



$\omega_{NC} = 1 \text{ рад/с}, \alpha = 30^\circ,$
 $AB = 20, BC = 10,$
 $BF = 50, FD = 50,$
 $NC = 25, EH = 30,$
 $FE = 50, FG = 30,$
 $OA = 20, KG = 25.$

Задача 9.15.

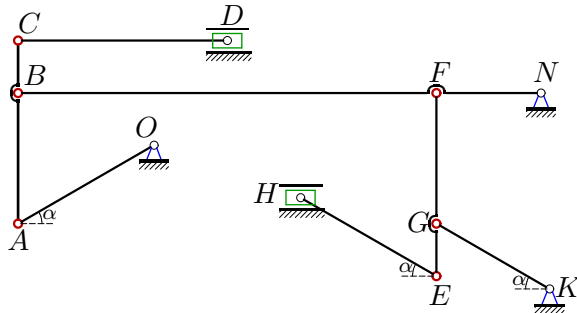
Кузьмина Елена Александровна



$\omega_{BF} = 1 \text{ рад/с}, \alpha = 30^\circ,$
 $AB = 30, BC = 30,$
 $NB = 20, NF = 30,$
 $CD = 15, EH = 30,$
 $FE = 35, FG = 10,$
 $OA = 30, KG = 25.$

Задача 9.16.

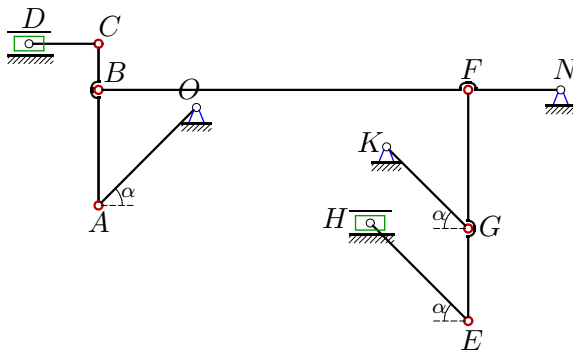
Литвинов Илья Олегович



$$\begin{aligned} \omega_{OA} &= 4 \text{ рад/с}, \alpha = 30^\circ, \\ AB &= 25, BC = 10, \\ BF &= 80, NF = 20, \\ CD &= 40, EH = 30, \\ FG &= 25, GE = 10, \\ OA &= 30, KG = 25. \end{aligned}$$

Задача 9.17.

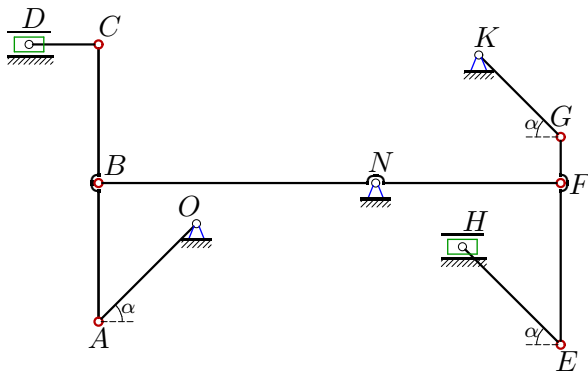
Мадюков Никита Евгеньевич



$$\begin{aligned} \omega_{OA} &= 4 \text{ рад/с}, \alpha = 45^\circ, \\ AB &= 25, BC = 10, \\ BF &= 80, NF = 20, \\ CD &= 15, EH = 30, \\ FG &= 30, GE = 20, \\ OA &= 30, KG = 25. \end{aligned}$$

Задача 9.18.

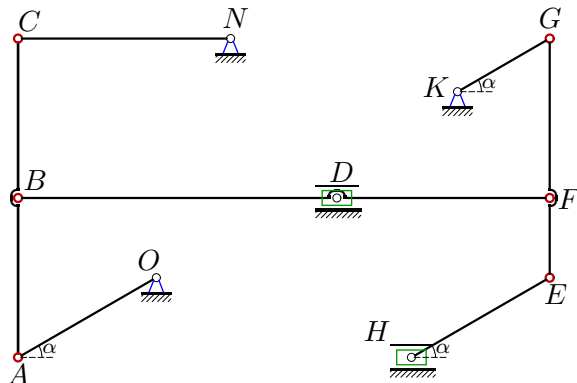
Майоров Арсений Андреевич



$$\begin{aligned} \omega_{BF} &= 4 \text{ рад/с}, \alpha = 45^\circ, \\ AB &= 30, BC = 30, \\ NB &= 60, NF = 40, \\ CD &= 15, EH = 30, \\ FE &= 35, FG = 10, \\ OA &= 30, KG = 25. \end{aligned}$$

Задача 9.19.

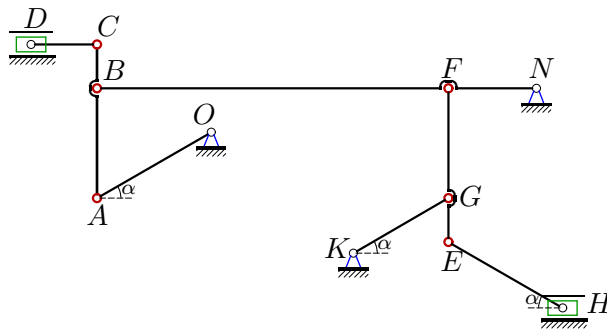
Матросов Сергей Михайлович



$$\begin{aligned} \omega_{OA} &= 3 \text{ рад/с}, \alpha = 30^\circ, \\ AB &= 30, BC = 30, \\ DB &= 60, DF = 40, \\ NC &= 40, EH = 30, \\ FE &= 15, FG = 30, \\ OA &= 30, KG = 20. \end{aligned}$$

Задача 9.24.

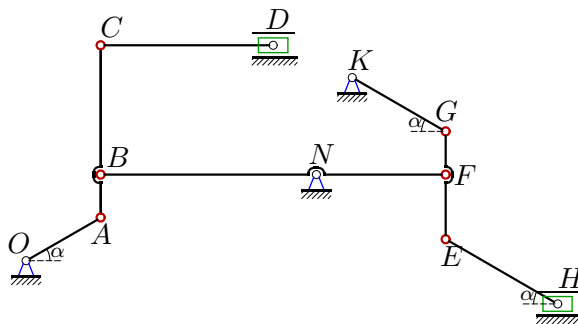
Тижкин Павел Игоревич



$\omega_{OA} = 4$ рад/с, $\alpha = 30^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 80$, $NF = 20$,
 $CD = 15$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 30$, $KG = 25$.

Задача 9.25.

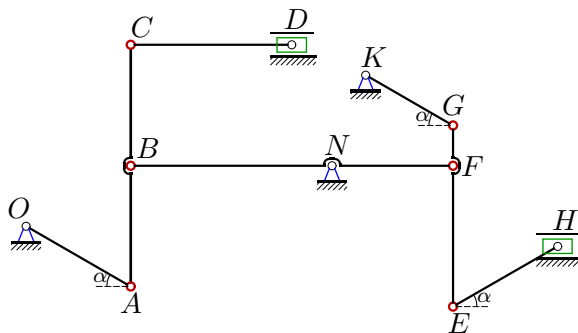
Фирсунина Сабина Назировна



$\omega_{BF} = 2$ рад/с, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 50$, $NF = 30$,
 $CD = 40$, $EH = 30$,
 $FE = 15$, $FG = 10$,
 $OA = 20$, $KG = 25$.

Задача 9.26.

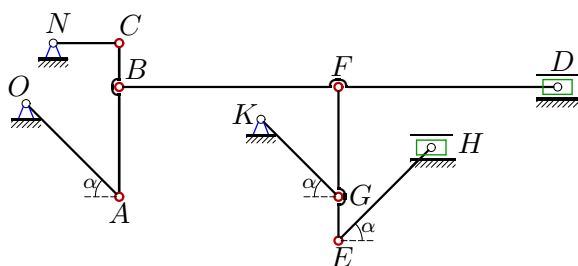
Чайка Леонид Кириллович



$\omega_{BF} = 3$ рад/с, $\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $NB = 50$, $NF = 30$,
 $CD = 40$, $EH = 30$,
 $FE = 35$, $FG = 10$,
 $OA = 30$, $KG = 25$.

Задача 9.27.

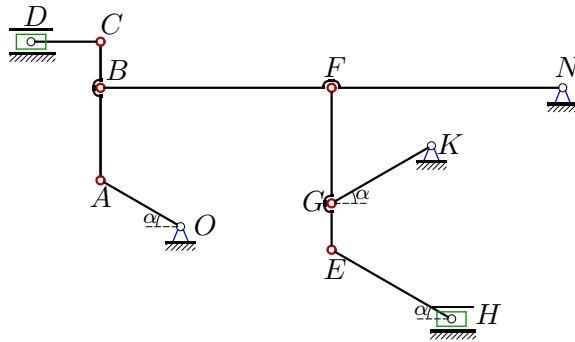
Черненко Андрей Витальевич



$\omega_{NC} = 1$ рад/с, $\alpha = 45^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 50$, $FD = 50$,
 $NC = 15$, $EH = 30$,
 $FE = 35$, $FG = 25$,
 $OA = 30$, $KG = 25$.

Задача 9.28.

Якушева Елена Игоревна



$\omega_{NB} = 1$ рад/с, $\alpha = 30^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 50$, $NF = 50$,
 $CD = 15$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 20$, $KG = 25$.