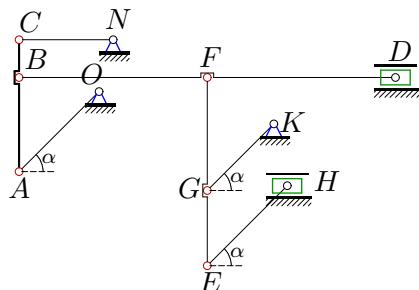


Кинематический анализ механизма (7 звеньев)

Плоский многозвеный механизм с одной степенью свободы приводится в движение кривошипом, который вращается против часовой стрелки с постоянной угловой скоростью. Найти скорости всех шарниров механизма (в см/с) и ускорения трех заданных шарниров (в м/с²). Размеры даны в см.

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

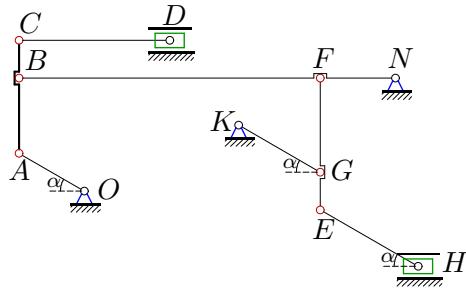
Задача К9.1.



Бродников Иван

$\omega_{NC} = 3 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 50$, $FD = 50$,
 $NC = 25$, $EH = 30$,
 $FE = 50$, $FG = 30$,
 $OA = 30$, $KG = 25$.
 a_A , a_B , a_C ?

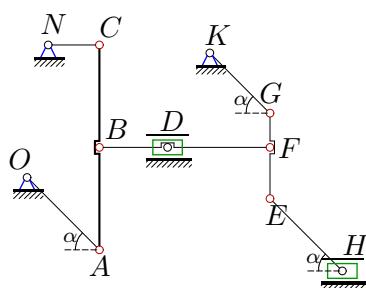
Задача К9.2.



Генералов Сергей

$\omega_{NB} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 80$, $NF = 20$,
 $CD = 40$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

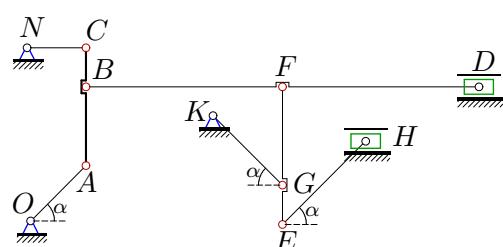
Задача К9.3.



Голованов Алексей

$\omega_{OA} = 3 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 30$, $BC = 30$,
 $DB = 20$, $DF = 30$,
 $NC = 15$, $EH = 30$,
 $FE = 15$, $FG = 10$,
 $OA = 30$, $KG = 25$.
 a_A , a_B , a_C ?

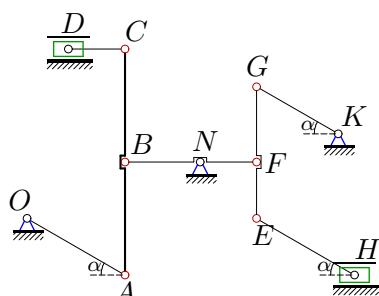
Задача К9.4.



Дощечкин Артём

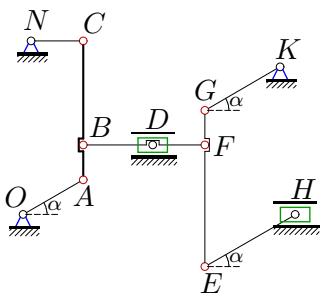
$\omega_{NC} = 3 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 50$, $FD = 50$,
 $NC = 15$, $EH = 30$,
 $FE = 35$, $FG = 25$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача К9.5.



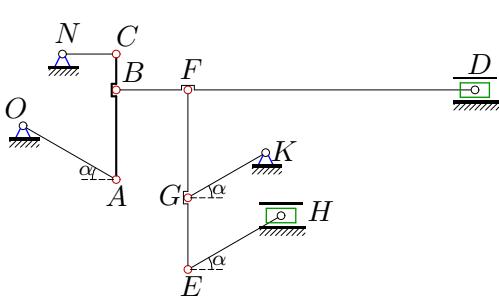
Дружинин Алексей

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

Задача К9.6.

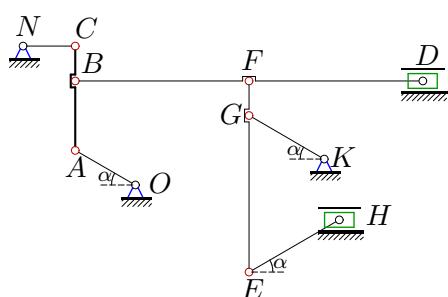
Агеев Алексей

$\omega_{NC} = 2 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $DB = 20$, $DF = 15$,
 $NC = 15$, $EH = 30$,
 $FE = 35$, $FG = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача К9.7.

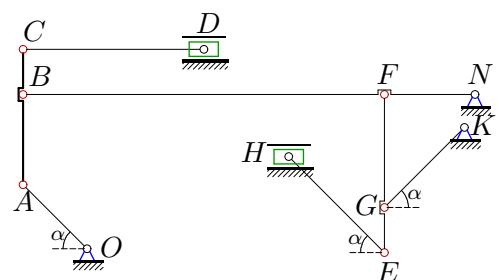
Колпаков Егор

$\omega_{OA} = 1 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 20$, $FD = 80$,
 $NC = 15$, $EH = 30$,
 $FE = 50$, $FG = 30$,
 $OA = 30$, $KG = 25$.
 a_A , a_B , a_C ?

Задача К9.8.

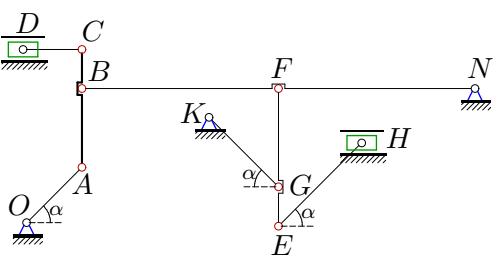
Кузьменко Илья

$\omega_{NC} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 50$, $FD = 50$,
 $NC = 15$, $EH = 30$,
 $FE = 55$, $FG = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача К9.9.

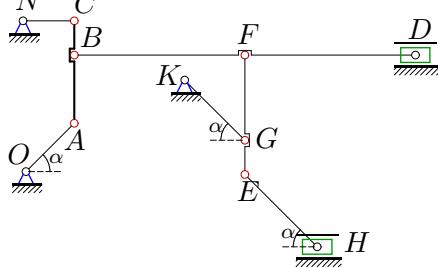
Лакштанкин Александр

$\omega_{OA} = 3 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 80$, $NF = 20$,
 $CD = 40$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача К9.10.

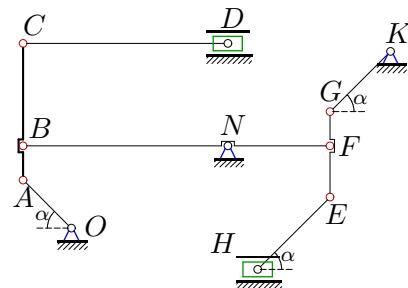
Мухамедов Тимур

$\omega_{OA} = 3 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 50$, $NF = 50$,
 $CD = 15$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача K9.11.

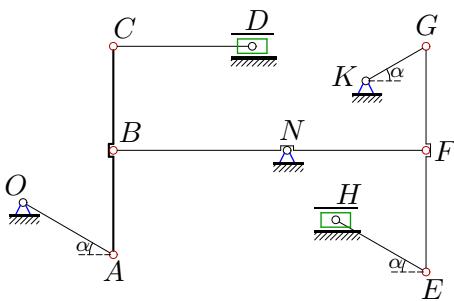
Обухов Олег

$\omega_{OA} = 3 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 50$, $FD = 50$,
 $NC = 15$, $EH = 30$,
 $FE = 35$, $FG = 25$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача K9.12.

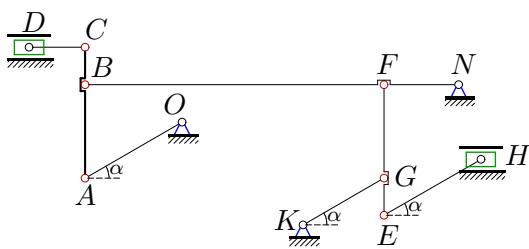
Останин Дмитрий

$\omega_{KG} = 2 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 60$, $NF = 30$,
 $CD = 60$, $EH = 30$,
 $FE = 15$, $FG = 10$,
 $OA = 20$, $KG = 25$.
 a_G , a_F , a_E ?

Задача K9.13.

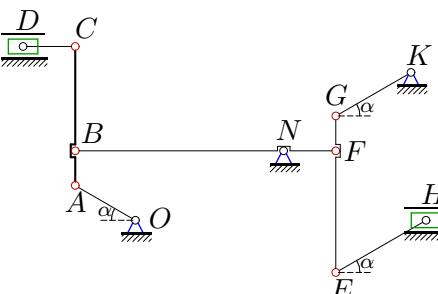
Плякина Карина

$\omega_{KG} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $NB = 50$, $NF = 40$,
 $CD = 40$, $EH = 30$,
 $FE = 35$, $FG = 30$,
 $OA = 30$, $KG = 20$.
 a_G , a_F , a_E ?

Задача K9.14.

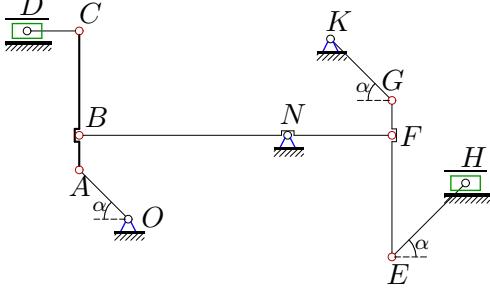
Полторакин Роман

$\omega_{OA} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 80$, $NF = 20$,
 $CD = 15$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 30$, $KG = 25$.
 a_A , a_B , a_C ?

Задача K9.15.

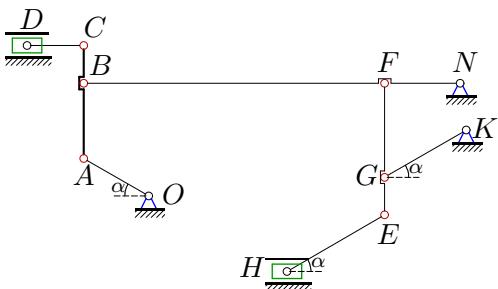
Романов Игорь

$\omega_{BF} = 2 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 60$, $NF = 15$,
 $CD = 15$, $EH = 30$,
 $FE = 35$, $FG = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , a_C ?

Задача К9.16.

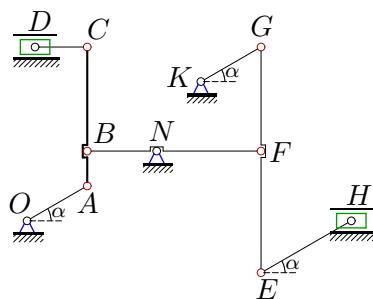
Скачков Роман

$\omega_{KG} = 2 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 60$, $NF = 30$,
 $CD = 15$, $EH = 30$,
 $FE = 35$, $FG = 10$,
 $OA = 20$, $KG = 25$.
 a_G , a_F , $a_E - ?$

Задача К9.17.

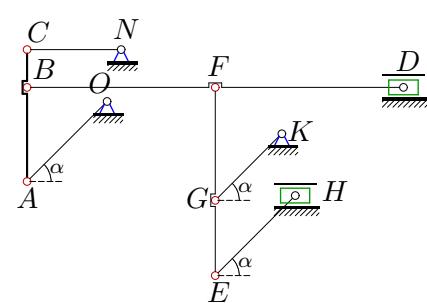
Сурков Алексей

$\omega_{NB} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 80$, $NF = 20$,
 $CD = 15$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , $a_C - ?$

Задача К9.18.

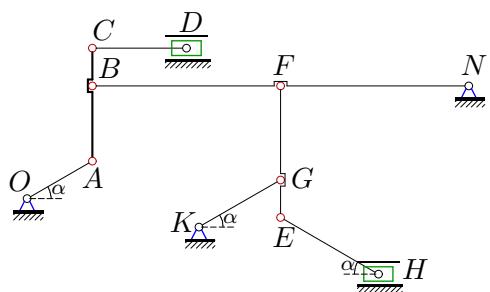
Сухих Александра

$\omega_{BF} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 10$, $BC = 30$,
 $NB = 20$, $NF = 30$,
 $CD = 15$, $EH = 30$,
 $FE = 35$, $FG = 30$,
 $OA = 20$, $KG = 20$.
 a_A , a_B , $a_C - ?$

Задача К9.19.

Хоруженко Кирилл

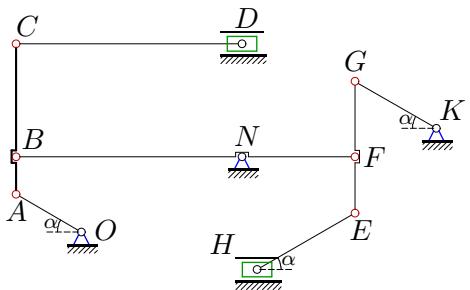
$\omega_{OA} = 1 \text{ рад/с}$, $\alpha = 45^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 50$, $FD = 50$,
 $NC = 25$, $EH = 30$,
 $FE = 50$, $FG = 30$,
 $OA = 30$, $KG = 25$.
 a_A , a_B , $a_C - ?$

Задача К9.20.

Чернышев Александр

$\omega_{NB} = 3 \text{ рад/с}$, $\alpha = 30^\circ$,
 $AB = 20$, $BC = 10$,
 $BF = 50$, $NF = 50$,
 $CD = 25$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 20$, $KG = 25$.
 a_A , a_B , $a_C - ?$

Задача К9.21.



Чулков Андрей

$$\begin{aligned} \omega_{OA} &= 1 \text{ рад/c, } \alpha = 30^\circ, \\ AB &= 10, BC = 30, \\ NB &= 60, NF = 30, \\ CD &= 60, EH = 30, \\ FE &= 15, FG = 20, \\ OA &= 20, KG = 25. \\ a_A, a_B, a_C - ? \end{aligned}$$