

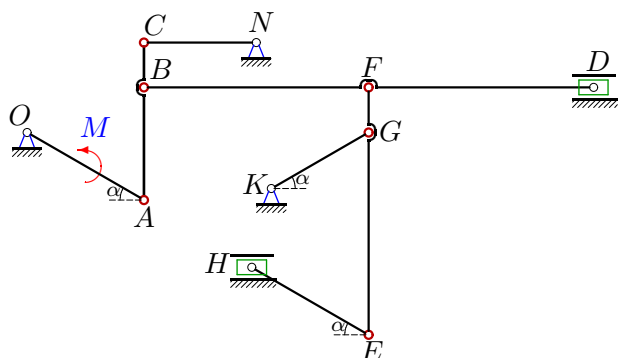
Условие равновесия механизма

Плоский многосвязный механизм с одной степенью свободы находится в равновесии. К кривошипу OA приложен момент M . Размеры даны в сантиметрах. Дан ряд p распределения дискретной случайной величины силы сопротивления в ползунах $T_i, i = 1, \dots, 4$. Найти математическое ожидание момента M .

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

Задача L-27.1.

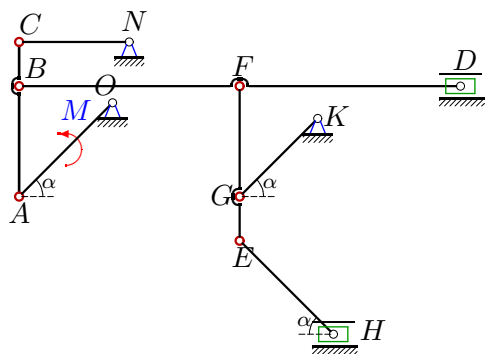
Ахметов Данис



$$\begin{aligned} \alpha &= 30^\circ, \\ AB &= 25, BC = 10, \\ BF &= 50, FD = 50, \\ NC &= 25, EH = 30, \\ FE &= 55, FG = 10, \\ OA &= 30, KG = 25. \\ p &= [0.1, 0.3, 0.4, 0.2], \\ T &= [8, 7.5, 6.5, 5] \text{ Н.} \end{aligned}$$

Задача L-27.2.

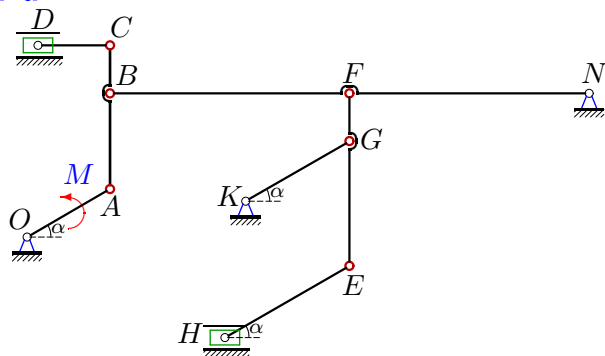
Васильков Илья



$$\begin{aligned} \alpha &= 45^\circ, \\ AB &= 25, BC = 10, \\ BF &= 50, FD = 50, \\ NC &= 25, EH = 30, \\ FE &= 35, FG = 25, \\ OA &= 30, KG = 25. \\ p &= [0.1, 0.3, 0.35, 0.25], \\ T &= [8.5, 7.5, 6.5, 5.5] \text{ Н.} \end{aligned}$$

Задача L-27.3.

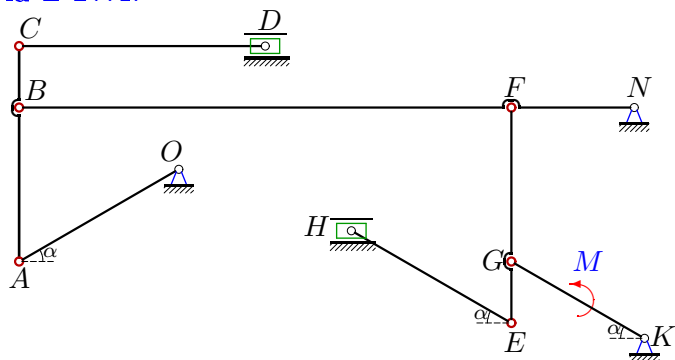
Васильченко Данил



$$\begin{aligned} \alpha &= 30^\circ, \\ AB &= 20, BC = 10, \\ BF &= 50, NF = 50, \\ CD &= 15, EH = 30, \\ FG &= 10, GE = 26, \\ OA &= 20, KG = 25. \\ p &= [0.05, 0.35, 0.4, 0.2], \\ T &= [8, 7.5, 6.5, 5.5] \text{ Н.} \end{aligned}$$

Задача L-27.4.

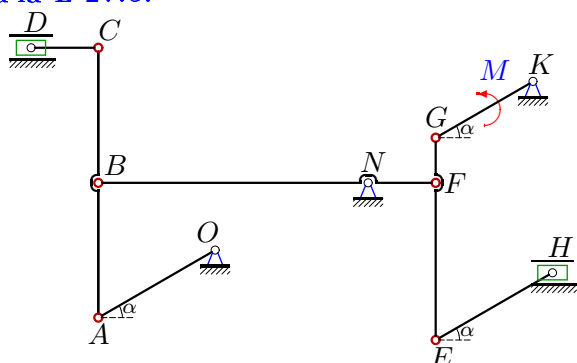
Егоров Сергей



$\alpha = 30^\circ$,
 $AB = 25, BC = 10,$
 $BF = 80, NF = 20,$
 $CD = 40, EH = 30,$
 $FG = 25, GE = 10,$
 $OA = 30, KG = 25.$
 $p = [0.1, 0.3, 0.4, 0.2],$
 $T = [8, 7.5, 6.5, 5] \text{ Н.}$

Задача L-27.5.

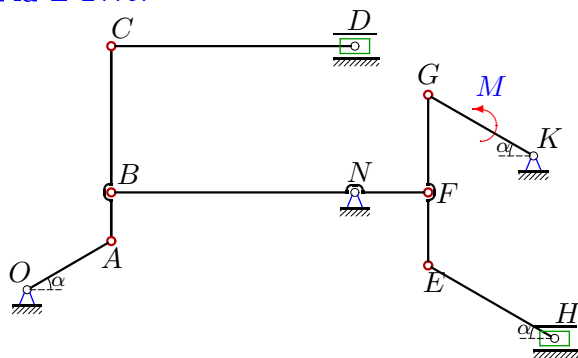
Жуков Андрей



$\alpha = 30^\circ$,
 $AB = 30, BC = 30,$
 $NB = 60, NF = 15,$
 $CD = 15, EH = 30,$
 $FE = 35, FG = 10,$
 $OA = 30, KG = 25.$
 $p = [0.05, 0.35, 0.35, 0.25],$
 $T = [8.5, 7.5, 6.5, 5] \text{ Н.}$

Задача L-27.6.

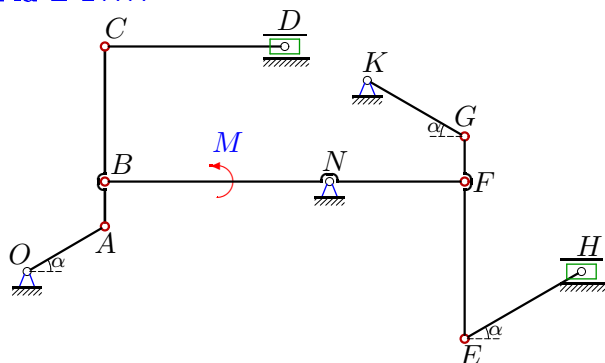
Иванова Дарья



$\alpha = 30^\circ$,
 $AB = 10, BC = 30,$
 $NB = 50, NF = 15,$
 $CD = 50, EH = 30,$
 $FE = 15, FG = 20,$
 $OA = 20, KG = 25.$
 $p = [0.05, 0.35, 0.35, 0.25],$
 $T = [8.5, 7, 6, 5.5] \text{ Н.}$

Задача L-27.7.

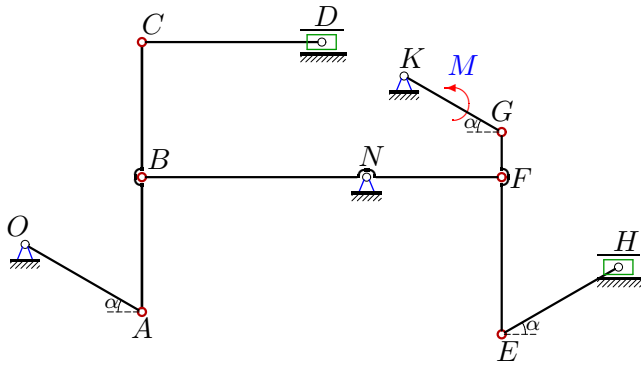
Компанеев Кирилл



$\alpha = 30^\circ$,
 $AB = 10, BC = 30,$
 $NB = 50, NF = 30,$
 $CD = 40, EH = 30,$
 $FE = 35, FG = 10,$
 $OA = 20, KG = 25.$
 $p = [0.05, 0.35, 0.4, 0.2],$
 $T = [8, 7, 6.5, 5.5] \text{ Н.}$

Задача L-27.8.

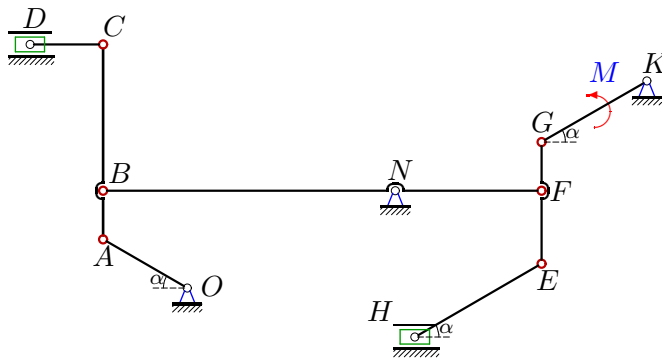
Овчаренко Уълъна



$\alpha = 30^\circ$,
 $AB = 30, BC = 30,$
 $NB = 50, NF = 30,$
 $CD = 40, EH = 30,$
 $FE = 35, FG = 10,$
 $OA = 30, KG = 25.$
 $p = [0.05, 0.35, 0.4, 0.2],$
 $T = [8, 7, 6.5, 5.5] \text{ H.}$

Задача L-27.9.

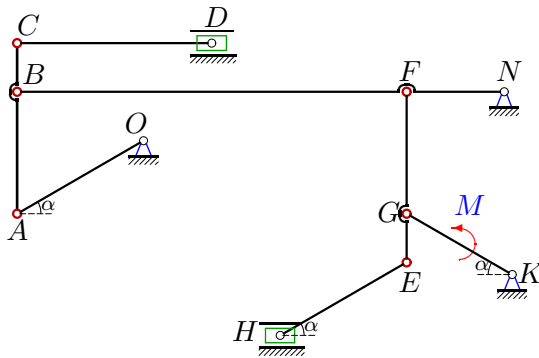
Петриченко Елизавета



$\alpha = 30^\circ$,
 $AB = 10, BC = 30,$
 $NB = 60, NF = 30,$
 $CD = 15, EH = 30,$
 $FE = 15, FG = 10,$
 $OA = 20, KG = 25.$
 $p = [0.05, 0.35, 0.4, 0.2],$
 $T = [8, 7.5, 6, 5.5] \text{ H.}$

Задача L-27.10.

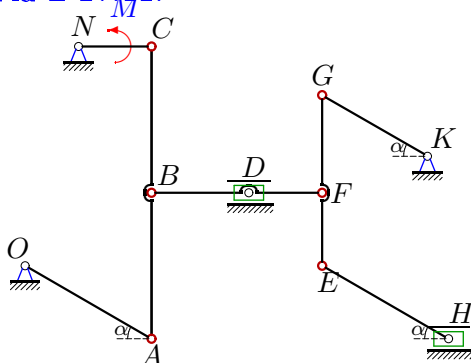
Разананирина Ранди



$\alpha = 30^\circ$,
 $AB = 25, BC = 10,$
 $BF = 80, NF = 20,$
 $CD = 40, EH = 30,$
 $FG = 25, GE = 10,$
 $OA = 30, KG = 25.$
 $p = [0.1, 0.3, 0.4, 0.2],$
 $T = [8, 7, 6.5, 5] \text{ H.}$

Задача L-27.11.

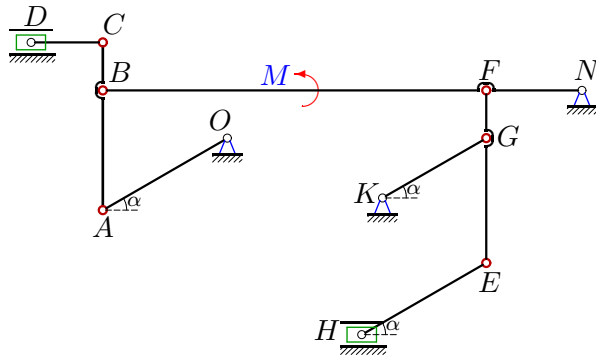
Скулова Полина



$\alpha = 30^\circ$,
 $AB = 30, BC = 30,$
 $DB = 20, DF = 15,$
 $NC = 15, EH = 30,$
 $FE = 15, FG = 20,$
 $OA = 30, KG = 25.$
 $p = [0.1, 0.3, 0.35, 0.25],$
 $T = [8.5, 7, 6, 5] \text{ H.}$

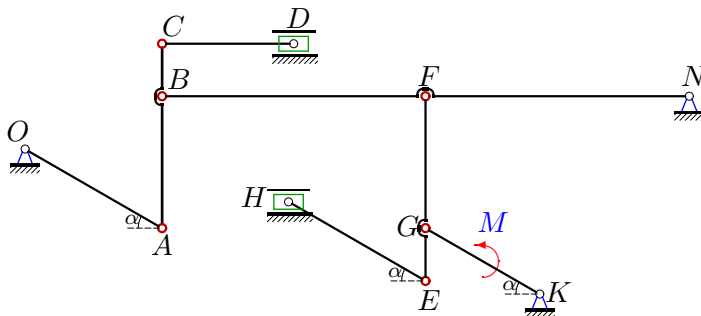
Задача L-27.12.

Широков Александр



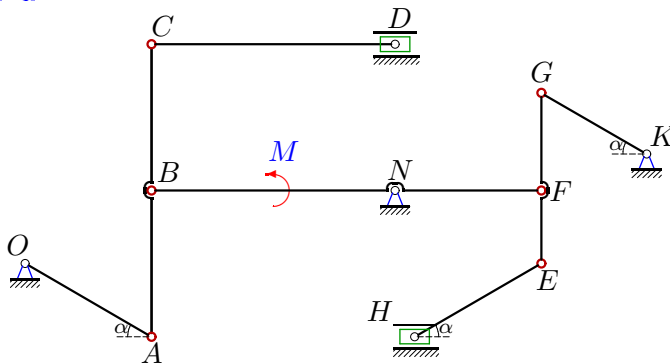
$\alpha = 30^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 80$, $NF = 20$,
 $CD = 15$, $EH = 30$,
 $FG = 10$, $GE = 26$,
 $OA = 30$, $KG = 25$.
 $p = [0.1, 0.3, 0.4, 0.2]$,
 $T = [8, 7.5, 6, 5]$ H.

Задача L-27.13.



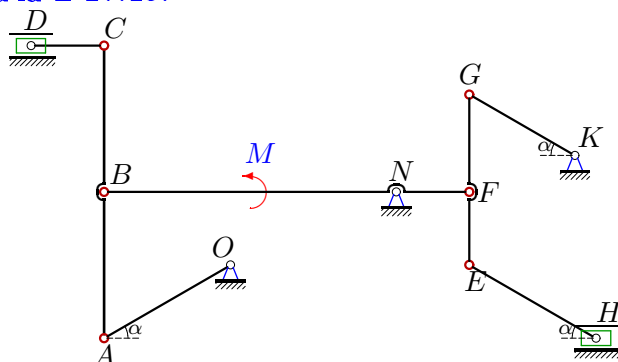
$\alpha = 30^\circ$,
 $AB = 25$, $BC = 10$,
 $BF = 50$, $NF = 50$,
 $CD = 25$, $EH = 30$,
 $FG = 25$, $GE = 10$,
 $OA = 30$, $KG = 25$.
 $p = [0.05, 0.35, 0.4, 0.2]$,
 $T = [8, 7, 6, 5]$ H.

Задача L-27.14.



$\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $NB = 50$, $NF = 30$,
 $CD = 50$, $EH = 30$,
 $FE = 15$, $FG = 20$,
 $OA = 30$, $KG = 25$.
 $p = [0.05, 0.35, 0.35, 0.25]$,
 $T = [8.5, 7, 6.5, 5.5]$ H.

Задача L-27.15.



$\alpha = 30^\circ$,
 $AB = 30$, $BC = 30$,
 $NB = 60$, $NF = 15$,
 $CD = 15$, $EH = 30$,
 $FE = 15$, $FG = 20$,
 $OA = 30$, $KG = 25$.
 $p = [0.1, 0.3, 0.4, 0.2]$,
 $T = [8, 7, 6, 5]$ H.