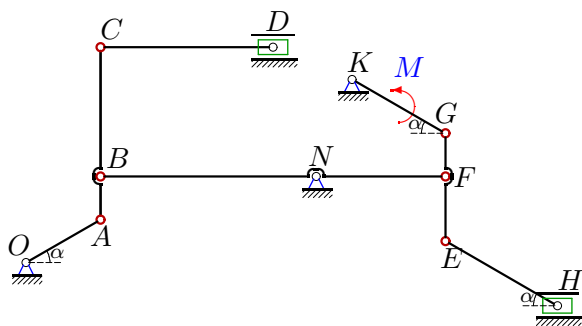# Условие равновесия механизма

Плоский многозвенный 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 $T_i, i = 1, ..., 4$. Найти математическое ожидание и дисперсию момента M.

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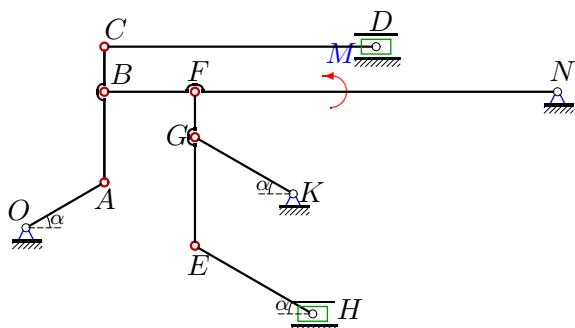

Задача L-27.1.   *Баринова Анастасия*

$\alpha = 30°$,
$AB = 10, BC = 30$,
$NB = 50, NF = 30$,
$CD = 40, EH = 30$,
$FE = 15, FG = 10$,
$OA = 20, KG = 25$.
$p = [0.1, 0.3, 0.35, 0.25]$,
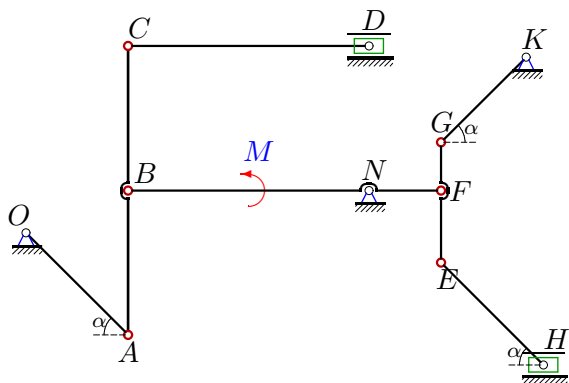$T = [8.5, 7.5, 6, 5]$ Н.

Задача L-27.2.   *Безобразова Анна*

$\alpha = 30°$,
$AB = 20, BC = 10$,
$BF = 20, NF = 80$,
$CD = 60, EH = 30$,
$FG = 10, GE = 24$,
$OA = 20, KG = 25$.
$p = [0.1, 0.3, 0.4, 0.2]$,
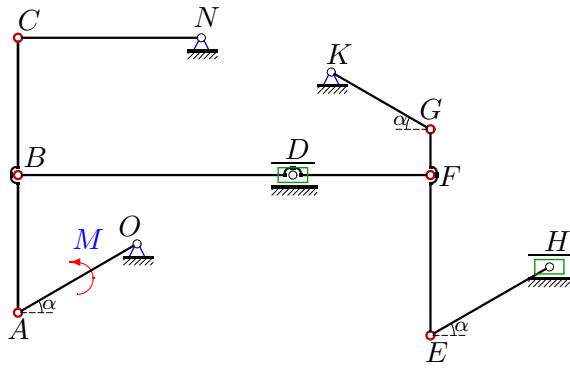$T = [8, 7, 6.5, 5.5]$ Н.

Задача L-27.3.   *Дубов Дмитрий*

$\alpha = 45°$,
$AB = 30, BC = 30$,
$NB = 50, NF = 15$,
$CD = 50, EH = 30$,
$FE = 15, FG = 10$,
$OA = 30, KG = 25$.
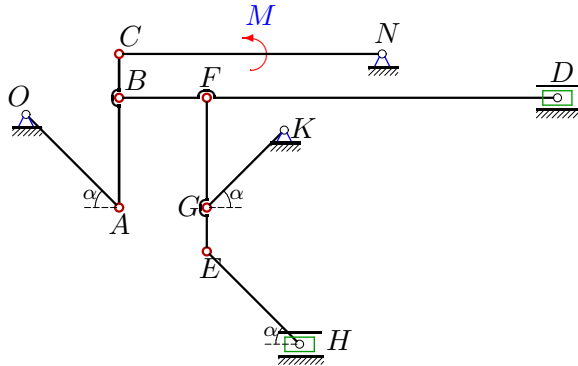$p = [0.05, 0.35, 0.4, 0.2]$,
$T = [8, 7, 6, 5]$ Н.

Задача L-27.4.

Кощеев Артем

$\alpha = 30°$,
$AB = 30$, $BC = 30$,
$DB = 60$, $DF = 30$,
$NC = 40$, $EH = 30$,
$FE = 35$, $FG = 10$,
$OA = 30$, $KG = 25$.
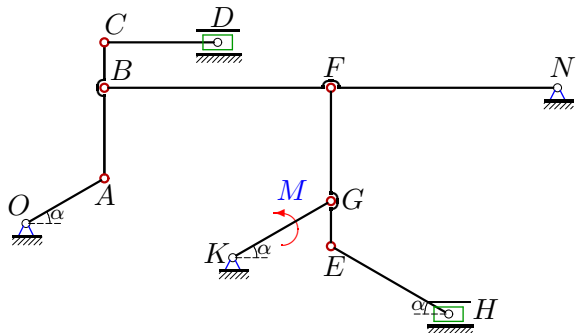$p = [0.05, 0.35, 0.35, 0.25]$,
$T = [8.5, 7, 6, 5]$ Н.

Задача L-27.5.

Логвинец Артем

$\alpha = 45°$,
$AB = 25$, $BC = 10$,
$BF = 20$, $FD = 80$,
$NC = 60$, $EH = 30$,
$FE = 35$, $FG = 25$,
$OA = 30$, $KG = 25$.
$p = [0.1, 0.3, 0.4, 0.2]$,
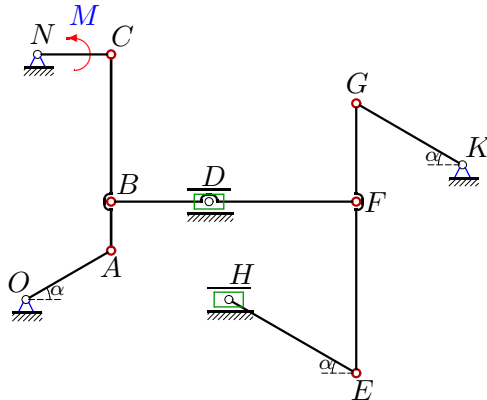$T = [8, 7, 6.5, 5.5]$ Н.

Задача L-27.6.

Малянов Иван

$\alpha = 30°$,
$AB = 20$, $BC = 10$,
$BF = 50$, $NF = 50$,
$CD = 25$, $EH = 30$,
$FG = 25$, $GE = 10$,
$OA = 20$, $KG = 25$.
$p = [0.05, 0.35, 0.4, 0.2]$,
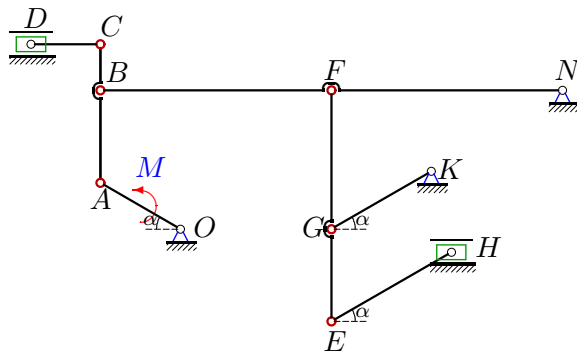$T = [8, 7, 6, 5.5]$ Н.

Задача L-27.7.

Рябцев Андрей

$\alpha = 30°$,
$AB = 10$, $BC = 30$,
$DB = 20$, $DF = 30$,
$NC = 15$, $EH = 30$,
$FE = 35$, $FG = 20$,
$OA = 20$, $KG = 25$.
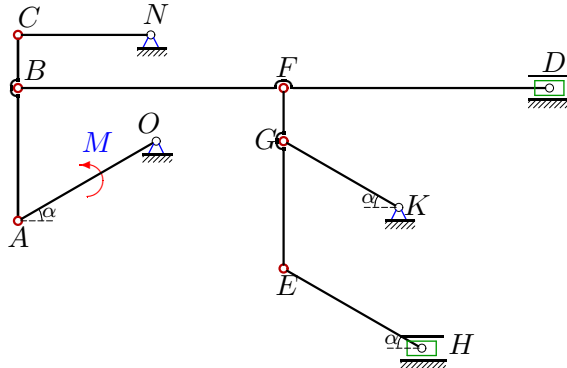$p = [0.05, 0.35, 0.35, 0.25]$,
$T = [8.5, 7, 6, 5]$ Н.

Задача L-27.8.

Сайпулаев Муса

$\alpha = 30°$,
$AB = 20$, $BC = 10$,
$BF = 50$, $NF = 50$,
$CD = 15$, $EH = 30$,
$FG = 30$, $GE = 20$,
$OA = 20$, $KG = 25$.
$p = [0.05, 0.35, 0.4, 0.2]$,
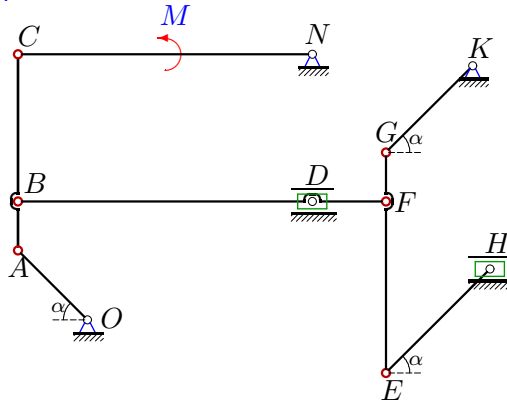$T = [8, 7, 6.5, 5.5]$ Н.

Задача L-27.9.

Смирнов Павел

$\alpha = 30°$,
$AB = 25$, $BC = 10$,
$BF = 50$, $FD = 50$,
$NC = 25$, $EH = 30$,
$FE = 34$, $FG = 10$,
$OA = 30$, $KG = 25$.
$p = [0.05, 0.35, 0.4, 0.2]$,
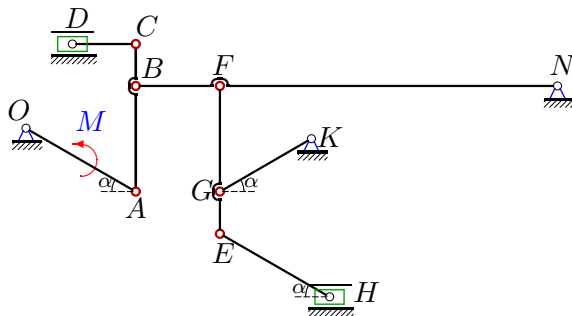$T = [8, 7, 6.5, 5.5]$ Н.

Задача L-27.10.

Цыганов Дмитрий

$\alpha = 45°$,
$AB = 10$, $BC = 30$,
$DB = 60$, $DF = 15$,
$NC = 60$, $EH = 30$,
$FE = 35$, $FG = 10$,
$OA = 20$, $KG = 25$.
$p = [0.05, 0.35, 0.4, 0.2]$,
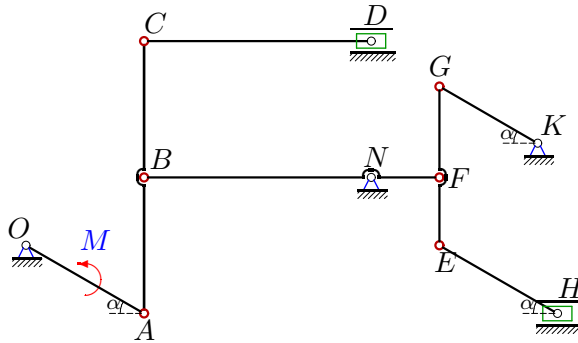$T = [8, 7.5, 6.5, 5]$ Н.

Задача L-27.11.

Васин Павел

$\alpha = 30°$,
$AB = 25$, $BC = 10$,
$BF = 20$, $NF = 80$,
$CD = 15$, $EH = 30$,
$FG = 25$, $GE = 10$,
$OA = 30$, $KG = 25$.
$p = [0.1, 0.3, 0.35, 0.25]$,
$T = [8.5, 7, 6.5, 5.5]$ Н.
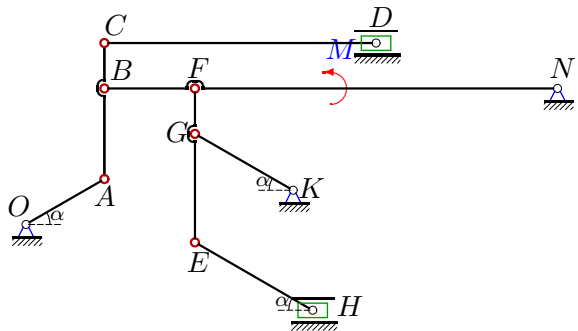
Задача L-27.12.

Похвалитова Анна

$\alpha = 30°$,
$AB = 30,\ BC = 30,$
$NB = 50,\ NF = 15,$
$CD = 50,\ EH = 30,$
$FE = 15,\ FG = 20,$
$OA = 30,\ KG = 25.$
$p = [0.05, 0.35, 0.4, 0.2],$
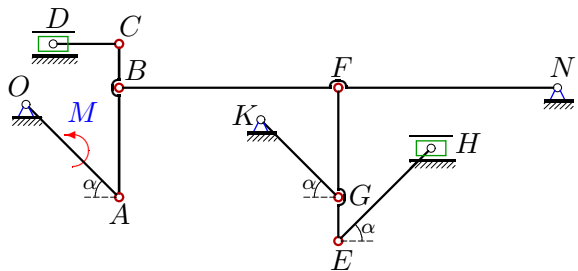$T = [8, 7.5, 6, 5.5]$ H.

Задача L-27.13.

Сенчихина Дарья

$\alpha = 30°$,
$AB = 20,\ BC = 10,$
$BF = 20,\ NF = 80,$
$CD = 60,\ EH = 30,$
$FG = 10,\ GE = 24,$
$OA = 20,\ KG = 25.$
$p = [0.1, 0.3, 0.4, 0.2],$
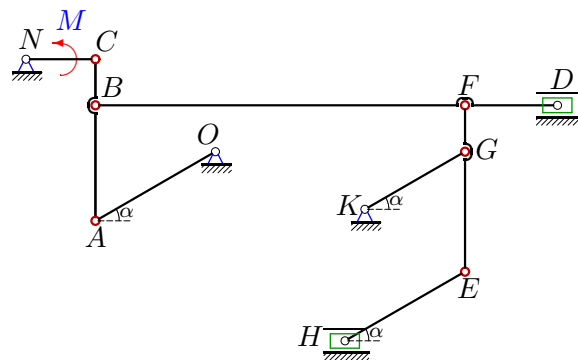$T = [8, 7.5, 6, 5.5]$ H.

Задача L-27.14.

Фам Тхай Ву

$\alpha = 45°$,
$AB = 25,\ BC = 10,$
$BF = 50,\ NF = 50,$
$CD = 15,\ EH = 30,$
$FG = 25,\ GE = 10,$
$OA = 30,\ KG = 25.$
$p = [0.05, 0.35, 0.4, 0.2],$
$T = [8, 7.5, 6, 5]$ H.

Задача L-27.15.

Ромеро Моника

$\alpha = 30°$,
$AB = 25,\ BC = 10,$
$BF = 80,\ FD = 20,$
$NC = 15,\ EH = 30,$
$FE = 36,\ FG = 10,$
$OA = 30,\ KG = 25.$
$p = [0.05, 0.35, 0.4, 0.2],$
$T = [8, 7, 6.5, 5.5]$ H.