

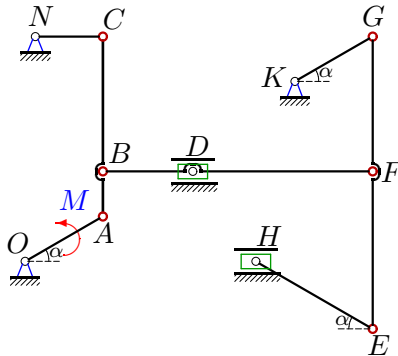
## Условие равновесия механизма

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 27.1.

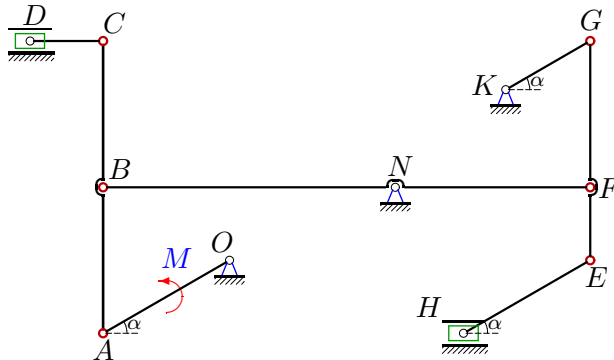
Базанович Иван



$\alpha = 30^\circ$ ,  
 $AB = 10, BC = 30$ ,  
 $DB = 20, DF = 40$ ,  
 $NC = 15, EH = 30$ ,  
 $FE = 35, FG = 30$ ,  
 $OA = 20, KG = 20$ .  
 $p = [0.05, 0.35, 0.4, 0.2]$ ,  
 $T = [8, 7.5, 6, 5.5]$  Н.

### Задача 27.2.

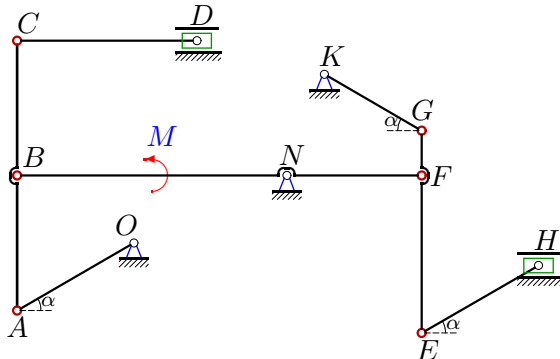
Беленов Степан



$\alpha = 30^\circ$ ,  
 $AB = 30, BC = 30$ ,  
 $NB = 60, NF = 40$ ,  
 $CD = 15, EH = 30$ ,  
 $FE = 15, FG = 30$ ,  
 $OA = 30, KG = 20$ .  
 $p = [0.1, 0.3, 0.4, 0.2]$ ,  
 $T = [8, 7, 6.5, 5.5]$  Н.

### Задача 27.3.

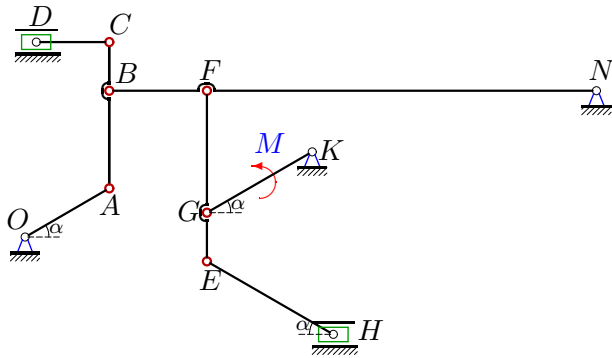
Дони Владлен



$\alpha = 30^\circ$ ,  
 $AB = 30, BC = 30$ ,  
 $NB = 60, NF = 30$ ,  
 $CD = 40, EH = 30$ ,  
 $FE = 35, FG = 10$ ,  
 $OA = 30, KG = 25$ .  
 $p = [0.1, 0.3, 0.4, 0.2]$ ,  
 $T = [8, 7.5, 6, 5]$  Н.

**Задача 27.4.**

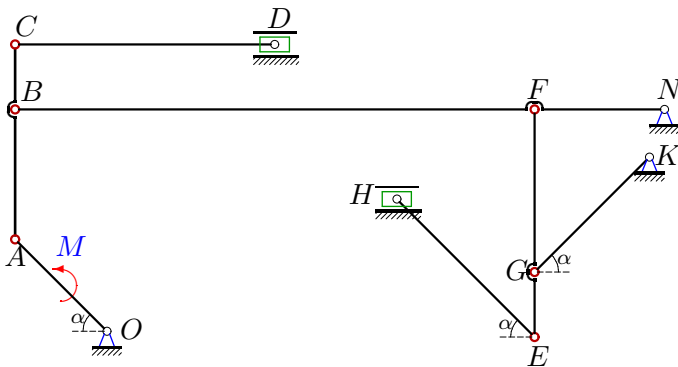
*Замашкин Валерий*



$\alpha = 30^\circ$ ,  
 $AB = 20, BC = 10,$   
 $BF = 20, NF = 80,$   
 $CD = 15, EH = 30,$   
 $FG = 25, GE = 10,$   
 $OA = 20, KG = 25.$   
 $p = [0.1, 0.3, 0.4, 0.2],$   
 $T = [8, 7, 6.5, 5.5] \text{ Н.}$

**Задача 27.5.**

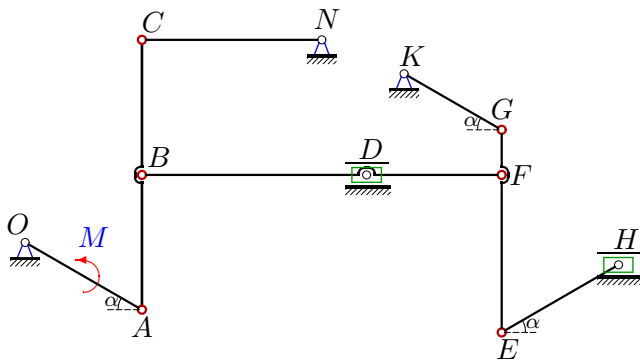
*Косогоров Алексей*



$\alpha = 45^\circ$ ,  
 $AB = 20, BC = 10,$   
 $BF = 80, NF = 20,$   
 $CD = 40, EH = 30,$   
 $FG = 25, GE = 10,$   
 $OA = 20, KG = 25.$   
 $p = [0.1, 0.3, 0.4, 0.2],$   
 $T = [8, 7, 6.5, 5] \text{ Н.}$

**Задача 27.6.**

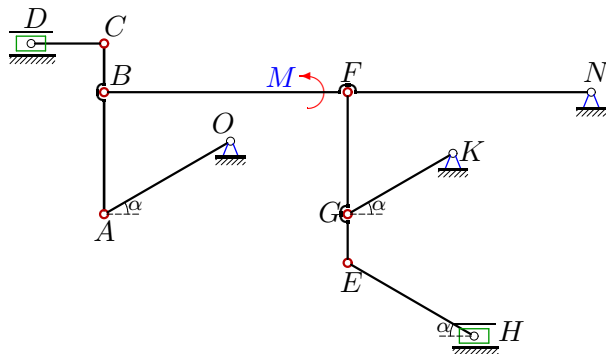
*Мальшев Илья*



$\alpha = 30^\circ$ ,  
 $AB = 30, BC = 30,$   
 $DB = 50, DF = 30,$   
 $NC = 40, EH = 30,$   
 $FE = 35, FG = 10,$   
 $OA = 30, KG = 25.$   
 $p = [0.1, 0.3, 0.4, 0.2],$   
 $T = [8, 7.5, 6, 5] \text{ Н.}$

**Задача 27.7.**

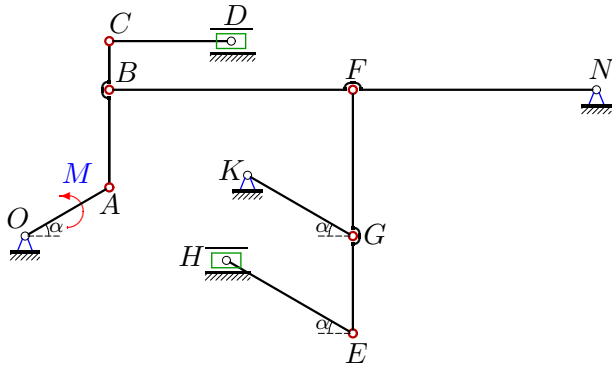
*Мордин Антон*



$\alpha = 30^\circ$ ,  
 $AB = 25, BC = 10,$   
 $BF = 50, NF = 50,$   
 $CD = 15, EH = 30,$   
 $FG = 25, GE = 10,$   
 $OA = 30, KG = 25.$   
 $p = [0.1, 0.3, 0.35, 0.25],$   
 $T = [8.5, 7, 6, 5] \text{ Н.}$

**Задача 27.8.**

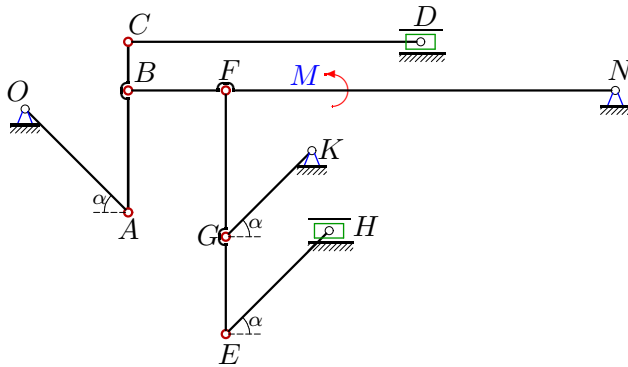
*Носенко Алексей*



$\alpha = 30^\circ$ ,  
 $AB = 20, BC = 10,$   
 $BF = 50, NF = 50,$   
 $CD = 25, EH = 30,$   
 $FG = 30, GE = 20,$   
 $OA = 20, KG = 25.$   
 $p = [0.1, 0.3, 0.35, 0.25],$   
 $T = [8.5, 7, 6, 5] \text{ Н.}$

**Задача 27.9.**

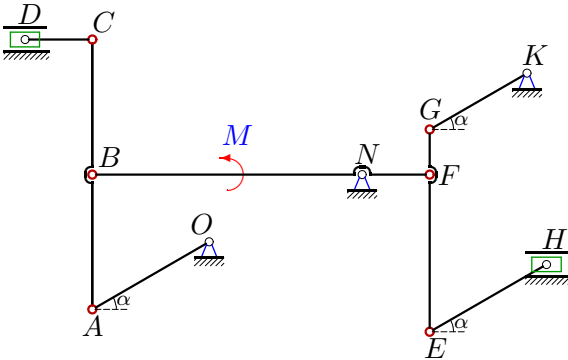
*Хурэлбаатар Очхуу*



$\alpha = 45^\circ$ ,  
 $AB = 25, BC = 10,$   
 $BF = 20, NF = 80,$   
 $CD = 60, EH = 30,$   
 $FG = 30, GE = 20,$   
 $OA = 30, KG = 25.$   
 $p = [0.05, 0.35, 0.35, 0.25],$   
 $T = [8.5, 7, 6.5, 5] \text{ Н.}$

**Задача 27.10.**

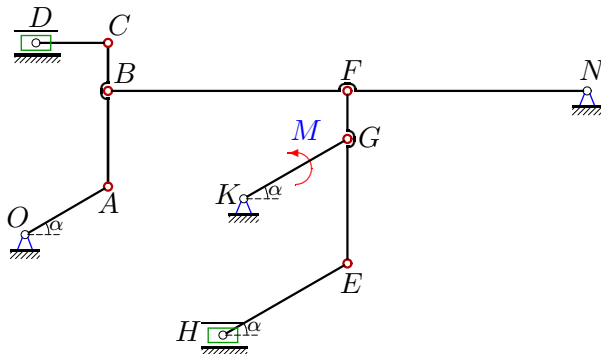
*Рейханов Людвиг*



$\alpha = 30^\circ$ ,  
 $AB = 30, BC = 30,$   
 $NB = 60, NF = 15,$   
 $CD = 15, EH = 30,$   
 $FE = 35, FG = 10,$   
 $OA = 30, KG = 25.$   
 $p = [0.05, 0.35, 0.35, 0.25],$   
 $T = [8.5, 7, 6.5, 5] \text{ Н.}$

**Задача 27.11.**

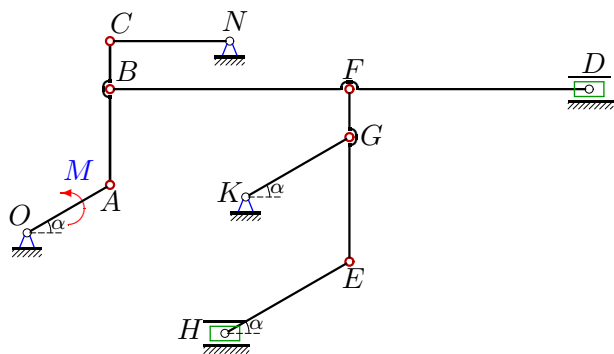
*Стручков Юрий*



$\alpha = 30^\circ$ ,  
 $AB = 20, BC = 10,$   
 $BF = 50, NF = 50,$   
 $CD = 15, EH = 30,$   
 $FG = 10, GE = 26,$   
 $OA = 20, KG = 25.$   
 $p = [0.1, 0.3, 0.4, 0.2],$   
 $T = [8, 7, 6.5, 5] \text{ Н.}$

**Задача 27.12.**

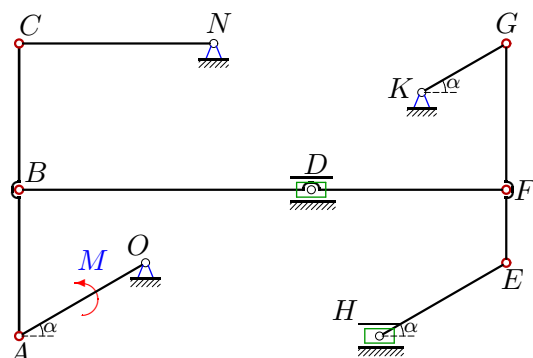
*Учаев Роман*



$\alpha = 30^\circ$ ,  
 $AB = 20, BC = 10,$   
 $BF = 50, FD = 50,$   
 $NC = 25, EH = 30,$   
 $FE = 36, FG = 10,$   
 $OA = 20, KG = 25.$   
 $p = [0.05, 0.35, 0.4, 0.2],$   
 $T = [8, 7, 6.5, 5.5] \text{ Н.}$

**Задача 27.13.**

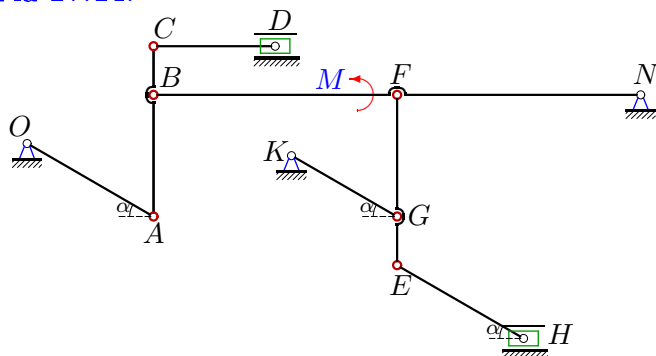
*Шестаков Виктор*



$\alpha = 30^\circ$ ,  
 $AB = 30, BC = 30,$   
 $DB = 60, DF = 40,$   
 $NC = 40, EH = 30,$   
 $FE = 15, FG = 30,$   
 $OA = 30, KG = 20.$   
 $p = [0.1, 0.3, 0.4, 0.2],$   
 $T = [8, 7, 6, 5] \text{ Н.}$

**Задача 27.14.**

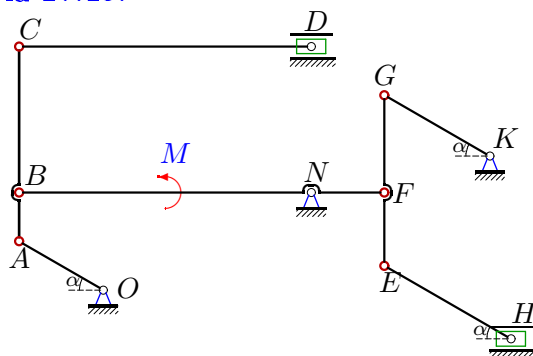
*Пахомов В. А.*



$\alpha = 30^\circ$ ,  
 $AB = 25, BC = 10,$   
 $BF = 50, NF = 50,$   
 $CD = 25, EH = 30,$   
 $FG = 25, GE = 10,$   
 $OA = 30, KG = 25.$   
 $p = [0.1, 0.3, 0.35, 0.25],$   
 $T = [8.5, 7.5, 6, 5] \text{ Н.}$

**Задача 27.15.**

*Дагьянов О.*



$\alpha = 30^\circ$ ,  
 $AB = 10, BC = 30,$   
 $NB = 60, NF = 15,$   
 $CD = 60, EH = 30,$   
 $FE = 15, FG = 20,$   
 $OA = 20, KG = 25.$   
 $p = [0.05, 0.35, 0.35, 0.25],$   
 $T = [8.5, 7.5, 6, 5] \text{ Н.}$

