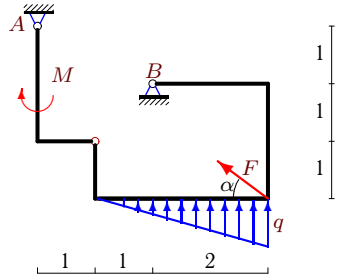
Составная рама с линейно распределенной нагрузкой

На раму, составленную из двух шарнирно соединенных частей, действует линейно распределенная нагрузка с максимальной интенсивностью q, сила F и момент M. Определить реакции опор (в кН). Размеры даны в метрах.

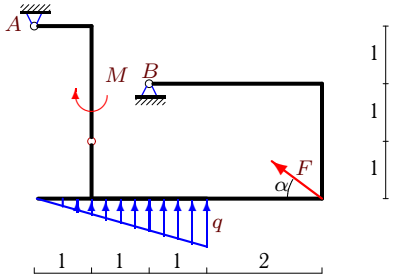
Кирсанов М.Н. Задачи по теоретической механике с решениями в **Maple** 11. – М.: ФИЗМАТЛИТ, 2010. — 264 с. (с.15)

Задача S34.1.



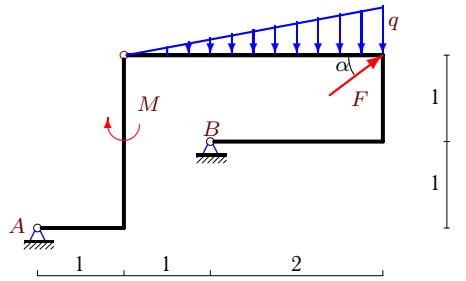
$q = 2$ кН/м, $F = 15$ кН,
$M = 36$ кНм, $\cos\alpha = 0.8$.

Задача S34.2.



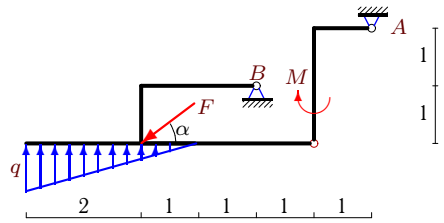
$q = 4$ кН/м, $F = 5$ кН,
$M = 20$ кНм, $\cos\alpha = 0.8$.

Задача S34.3.



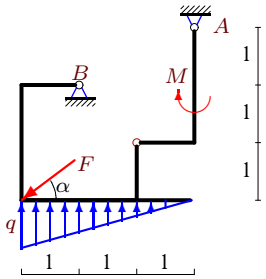
$q = 2$ кН/м, $F = 10$ кН,
$M = 2$ кНм, $\cos\alpha = 0.8$.

Задача S34.4.



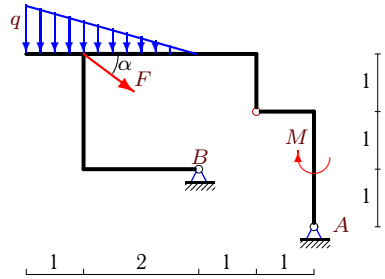
$q = 2$ кН/м, $F = 5$ кН,
$M = 1$ кНм, $\cos\alpha = 0.8$.

Задача S34.5.



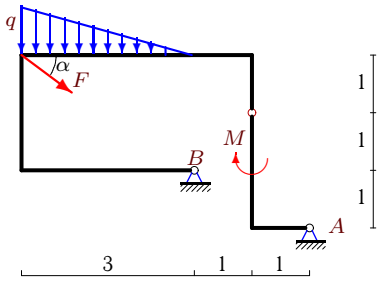
$q = 6$ кН/м, $F = 10$ кН,
$M = 16$ кНм, $\cos\alpha = 0.8$.

Задача S34.6.



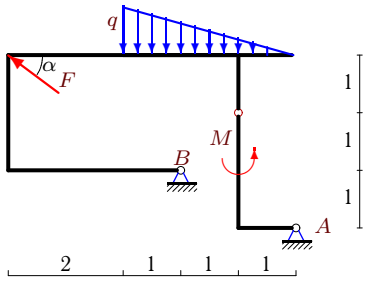
$q = 2$ кН/м, $F = 15$ кН,
$M = 36$ кНм, $\cos\alpha = 0.8$.

Задача S34.7.



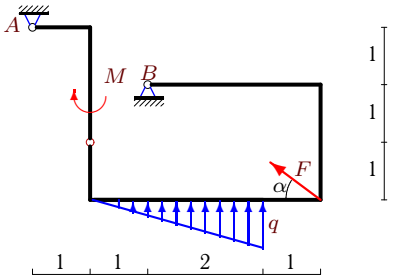
$q = 2$ кН/м, $F = 15$ кН,
$M = 42$ кНм, $\cos\alpha = 0.8$.

Задача S34.8.



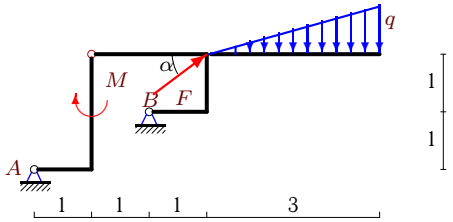
$q = 6$ кН/м, $F = 15$ кН,
$M = 18$ кНм, $\cos\alpha = 0.8$.

Задача S34.9.



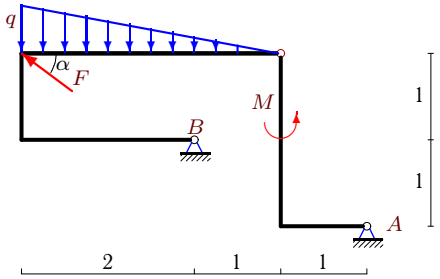
$q = 4$ кН/м, $F = 15$ кН,
$M = 45$ кНм, $\cos\alpha = 0.8$.

Задача S34.10.



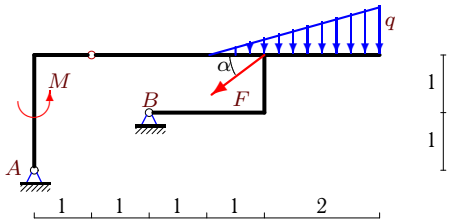
$q = 2$ кН/м, $F = 10$ кН,
$M = 11$ кНм, $\cos\alpha = 0.8$.

Задача S34.11.



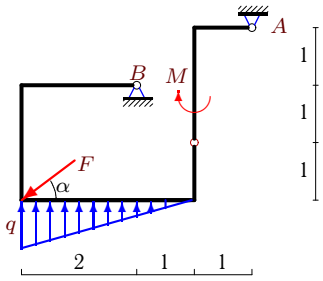
$q = 2$ кН/м, $F = 10$ кН,
$M = 11$ кНм, $\cos\alpha = 0.8$.

Задача S34.12.



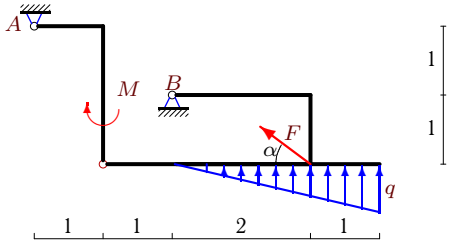
$q = 6$ кН/м, $F = 10$ кН,
$M = 26$ кНм, $\cos\alpha = 0.8$.

Задача S34.13.



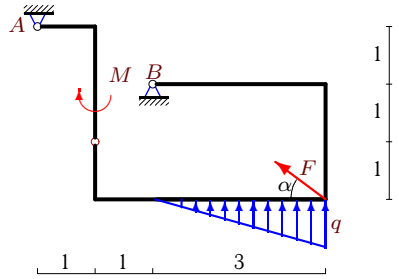
$q = 4$ кН/м, $F = 10$ кН,
$M = 19$ кНм, $\cos\alpha = 0.8$.

Задача S34.14.



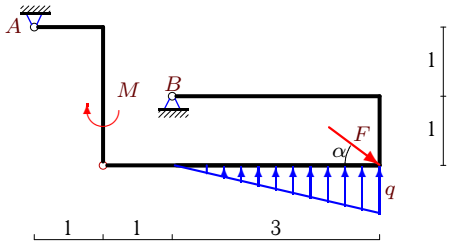
$q = 4$ кН/м, $F = 5$ кН,
$M = 16$ кНм, $\cos\alpha = 0.8$.

Задача S34.15.



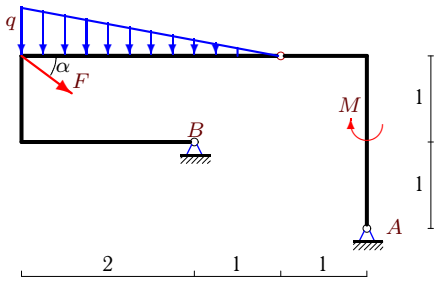
$q = 6$ кН/м, $F = 5$ кН,
$M = 20$ кНм, $\cos\alpha = 0.8$.

Задача S34.16.



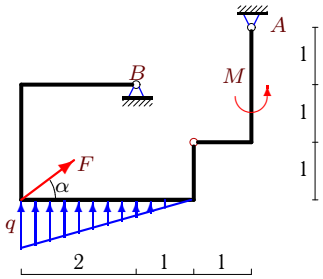
$q = 4$ кН/м, $F = 10$ кН,
$M = 1$ кНм, $\cos\alpha = 0.8$.

Задача S34.17.



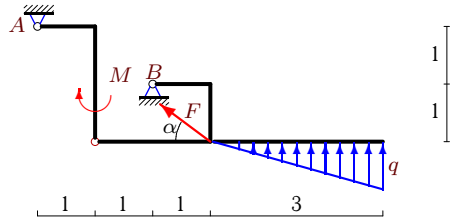
$q = 6$ кН/м, $F = 20$ кН,
$M = 34$ кНм, $\cos\alpha = 0.8$.

Задача S34.18.



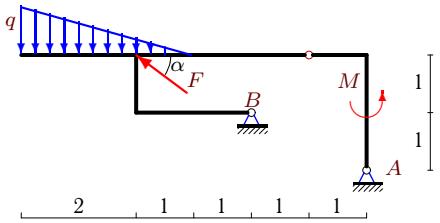
$q = 2$ кН/м, $F = 15$ кН,
$M = 42$ кНм, $\cos\alpha = 0.8$.

Задача S34.19.



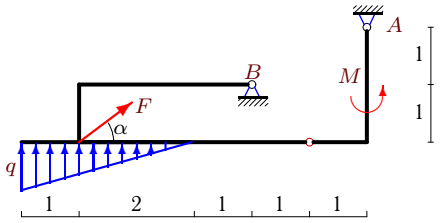
$q = 6$ кН/м, $F = 5$ кН,
$M = 22$ кНм, $\cos\alpha = 0.8$.

Задача S34.20.



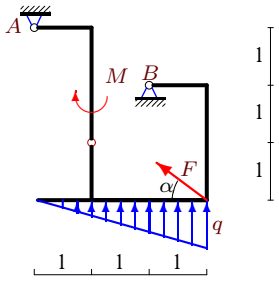
$q = 2$ кН/м, $F = 5$ кН,
$M = 4$ кНм, $\cos\alpha = 0.8$.

Задача S34.21.



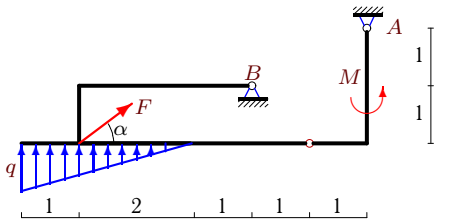
$q = 2$ кН/м, $F = 15$ кН,
$M = 33$ кНм, $\cos\alpha = 0.8$.

Задача S34.22.



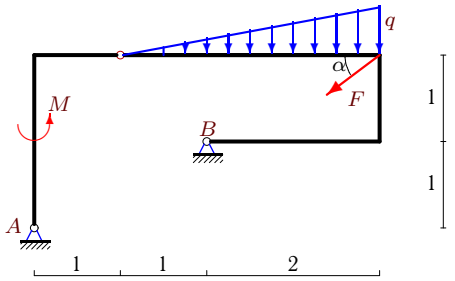
$q = 2$ кН/м, $F = 10$ кН,
$M = 28$ кНм, $\cos\alpha = 0.8$.

Задача S34.23.



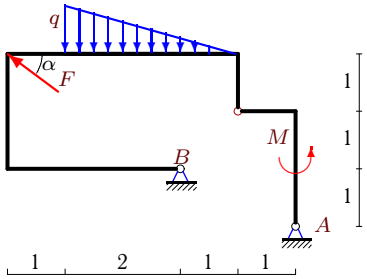
$q = 4$ кН/м, $F = 15$ кН,
$M = 27$ кНм, $\cos\alpha = 0.8$.

Задача S34.24.



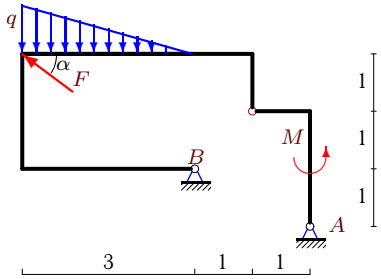
$q = 6$ кН/м, $F = 10$ кН,
$M = 29$ кНм, $\cos\alpha = 0.8$.

Задача S34.25.



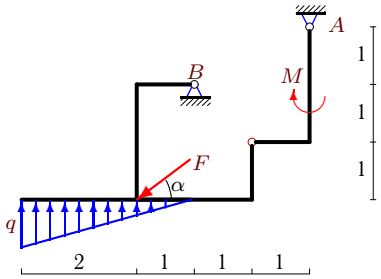
$q = 4$ кН/м, $F = 10$ кН,
$M = 13$ кНм, $\cos\alpha = 0.8$.

Задача S34.26.



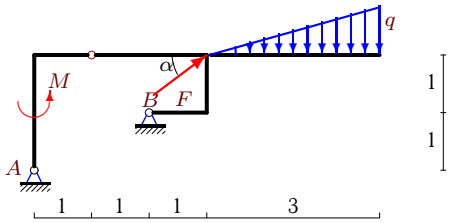
$q = 4$ кН/м, $F = 15$ кН,
$M = 27$ кНм, $\cos\alpha = 0.8$.

Задача S34.27.



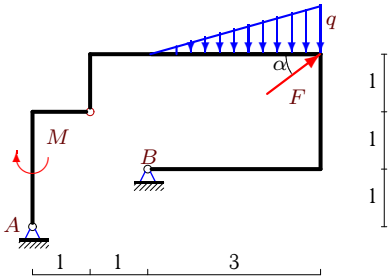
$q = 6$ кН/м, $F = 10$ кН,
$M = 16$ кНм, $\cos\alpha = 0.8$.

Задача S34.28.



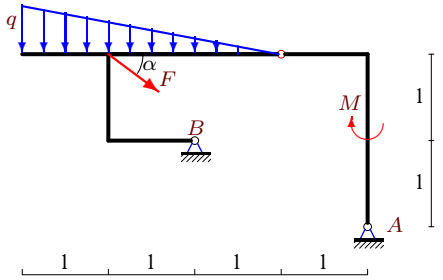
$q = 4$ кН/м, $F = 10$ кН,
$M = 1$ кНм, $\cos\alpha = 0.8$.

Задача S34.29.



$q = 2$ кН/м, $F = 10$ кН,
$M = 10$ кНм, $\cos\alpha = 0.8$.

Задача S34.30.



$q = 4$ кН/м, $F = 15$ кН,
$M = 30$ кНм, $\cos\alpha = 0.8$.

S34 **Ответы.**

Составная рама с линейно распределенной нагрузкой 28.08.2011

№	X_A	Y_A	X_B	Y_B
1	-11	-14	23	2
2	-7	-6	11	-3
3	1	0	-9	-3
4	2	5	2	-5
5	-2	12	10	-15
6	12	12	-24	0
7	17	8	-29	4
8	-7	-4	19	4
9	-18	-9	30	-6
10	0	-11	-8	8
11	-4	-3	12	0
12	-19	-12	27	27
13	-3	13	11	-13
14	-10	4	14	-13
15	-13	6	17	-18
16	-1	1	-7	-1
17	17	0	-33	21
18	13	-16	-25	4
19	-16	10	20	-22
20	1	-6	3	6
21	19	5	-31	-17
22	-6	-16	14	7
23	20	13	-32	-28
24	-14	1	22	14
25	-3	-7	11	7
26	-6	-15	18	12
27	4	24	4	-27
28	-7	-13	-1	13
29	2	-6	-10	3
30	11	8	-23	7

S34 файл o34s2A