

Простая составная рама с распределенной нагрузкой

Конструкция состоит из двух частей, соединенных шарнирно. Определить реакции опор (в кН). Размеры даны в метрах, моменты в кНм, распределенные нагрузки в кН/м.

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

Задача S-33.1. 7

$q = 6, M_1 = 6, M_2 = 23.$

Задача S-33.2. 7

$q = 6, M_1 = 3, M_2 = 70.$

Задача S-33.3. 7

$q = 8, M_1 = 5, M_2 = 3.$

Задача S-33.4. 7

$AC = 5, q = 2, M_1 = 77, M_2 = 70.$

Задача S-33.5. 7

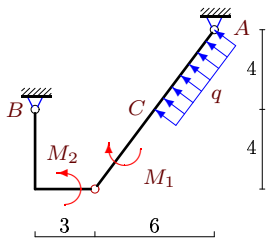
$q = 4, M_1 = 3, M_2 = 44.$

Задача S-33.6. 7

$AC = 5, q = 4, M_1 = 68, M_2 = 66.$

Задача S-33.7.

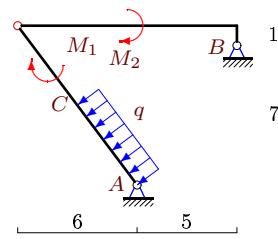
7



$AC = 5, q = 2, M_1 = 27, M_2 = 62.$

Задача S-33.8.

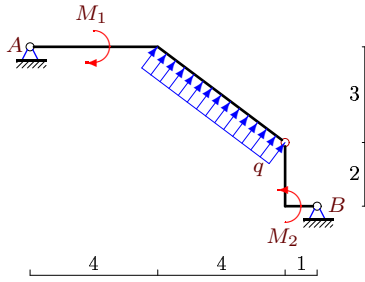
7



$AC = 5, q = 2, M_1 = 7, M_2 = 156.$

Задача S-33.9.

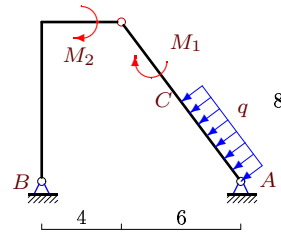
7



$q = 2, M_1 = 7, M_2 = 16.$

Задача S-33.10.

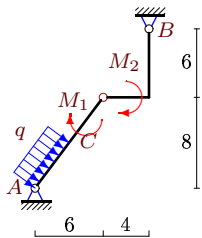
7



$AC = 5, q = 2, M_1 = 5, M_2 = 80.$

Задача S-33.11.

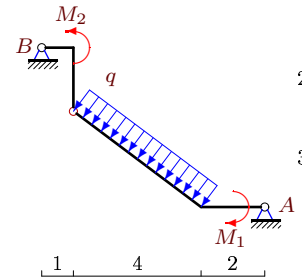
7



$AC = 5, q = 2, M_1 = 71, M_2 = 70.$

Задача S-33.12.

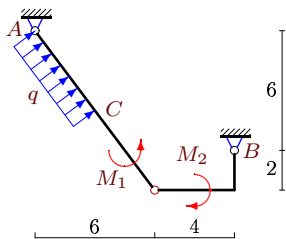
7



$q = 6, M_1 = 3, M_2 = 44.$

Задача S-33.13.

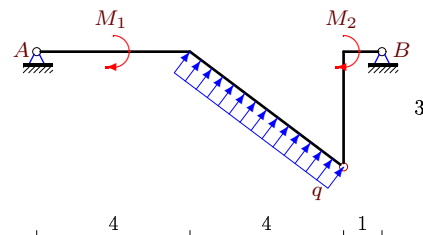
7



$AC = 5, q = 2, M_1 = 119, M_2 = 36.$

Задача S-33.14.

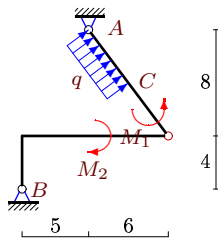
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$q = 2, M_1 = 2, M_2 = 10.$

Задача S-33.15.

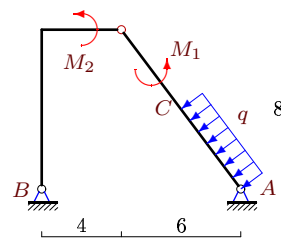
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$AC = 5, q = 2, M_1 = 299, M_2 = 146.$

Задача S-33.16.

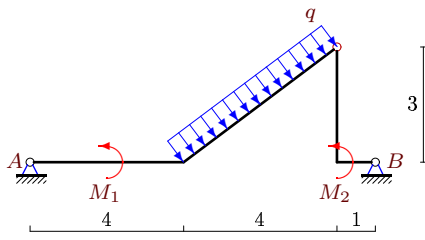
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$AC = 5, q = 2, M_1 = 235, M_2 = 40.$

Задача S-33.17.

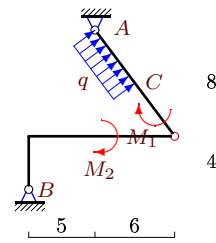
7



$q = 2, M_1 = 2, M_2 = 10.$

Задача S-33.18.

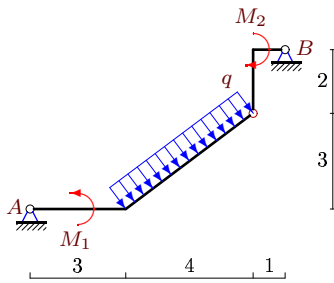
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$AC = 5, q = 2, M_1 = 37, M_2 = 90.$

Задача S-33.19.

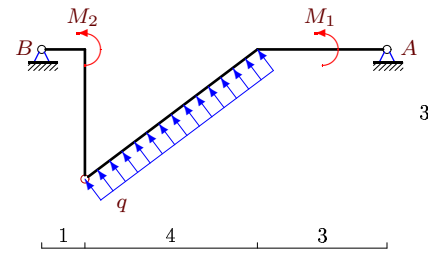
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$q = 4, M_1 = 5, M_2 = 29.$

Задача S-33.20.

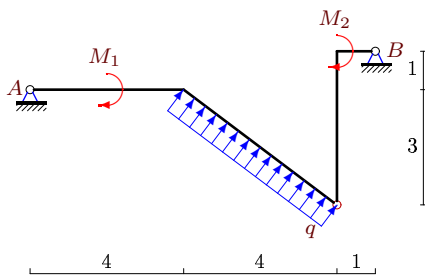
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$q = 4, M_1 = 7, M_2 = 35.$

Задача S-33.21.

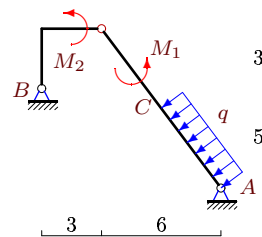
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$q = 2, M_1 = 4, M_2 = 24.$

Задача S-33.22.

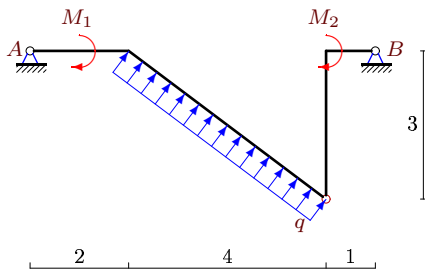
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$AC = 5, q = 2, M_1 = 117, M_2 = 78.$

Задача S-33.23.

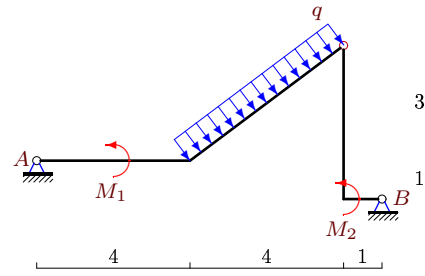
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$q = 6, M_1 = 6, M_2 = 47.$

Задача S-33.24.

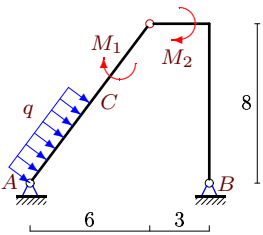
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$q = 2, M_1 = 1, M_2 = 28.$

Задача S-33.25.

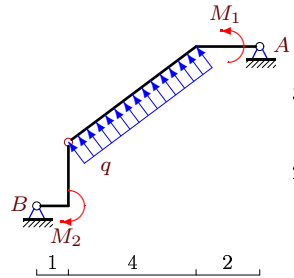
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$AC = 5, q = 2, M_1 = 3, M_2 = 26.$

Задача S-33.26.

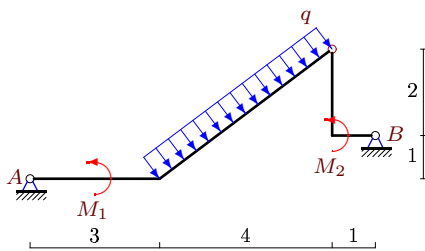
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$q = 6, M_1 = 6, M_2 = 48.$

Задача S-33.27.

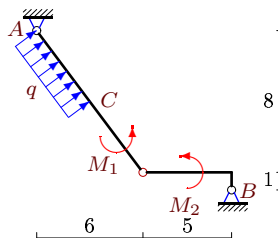
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$q = 4, M_1 = 3, M_2 = 18.$

Задача S-33.28.

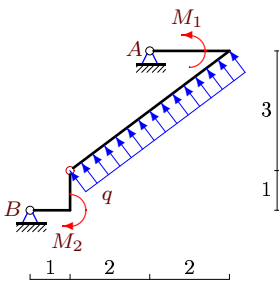
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$AC = 5, q = 2, M_1 = 41, M_2 = 55.$

Задача S-33.29.

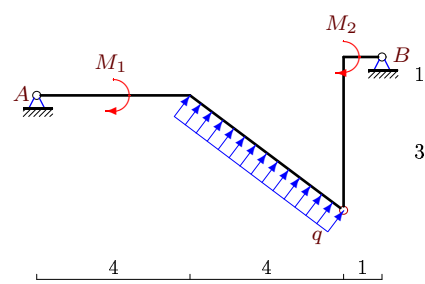
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$q = 8, M_1 = 5, M_2 = 4.$

Задача S-33.30.

7



$q = 2, M_1 = 2, M_2 = 15.$

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Ответы.

Простая составная рама с распределенной нагрузкой 12.02.2015

№	X_A	Y_A	X_B	Y_B
1	1	13	17	11
2	2	-14	-20	-10
3	1	54	-25	-22
4	-10	-12	2	6
5	1	8	-13	8
6	5	7	11	5
7	-3	-12	11	6
8	17	-9	-9	15
9	0	-4	-6	-4
10	1	12	7	-6
11	1	2	-9	4
12	2	12	16	12
13	10	-6	-18	0
14	-1	-3	-5	-5
15	16	16	-24	-22
16	-2	-24	10	30
17	-1	3	-5	5
18	-14	0	6	-6
19	-2	7	-10	9
20	-2	-9	14	-7
21	1	-4	-7	-4
22	9	-19	-1	25
23	1	-14	-19	-10
24	2	4	-8	4
25	-9	0	1	6
26	-1	-14	19	-10
27	1	8	-13	8
28	-8	5	0	-11
29	1	-51	23	19
30	-1	-3	-5	-5

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