

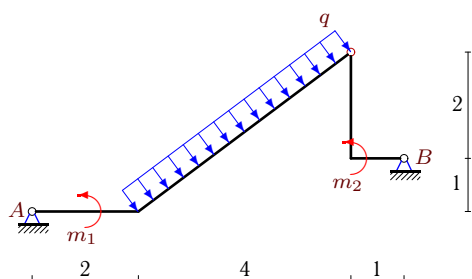
## Простая составная рама с распределенной нагрузкой

Конструкция состоит из двух частей, соединенных шарнирно. 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 S33.1.**

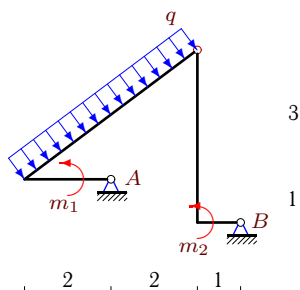
2



$q = 6 \text{ кН/м}, m_1 = 6 \text{ кНм}, m_2 = 23 \text{ кНм}.$

**Задача S33.2.**

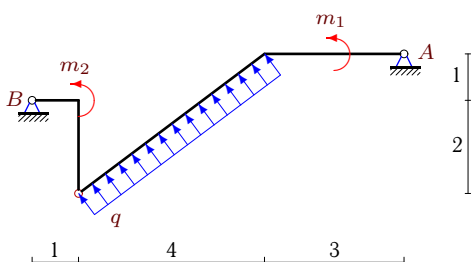
2



$q = 2 \text{ кН/м}, m_1 = 1 \text{ кНм}, m_2 = 29 \text{ кНм}.$

**Задача S33.3.**

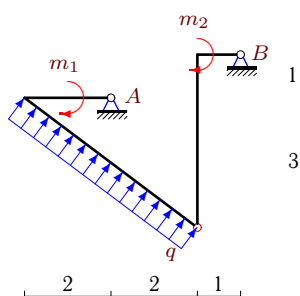
2



$q = 4 \text{ кН/м}, m_1 = 5 \text{ кНм}, m_2 = 11 \text{ кНм}.$

**Задача S33.4.**

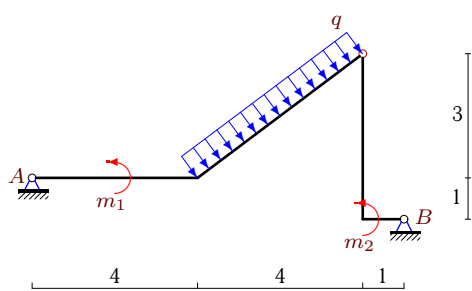
2



$q = 8 \text{ кН/м}, m_1 = 5 \text{ кНм}, m_2 = 122 \text{ кНм}.$

**Задача S33.5.**

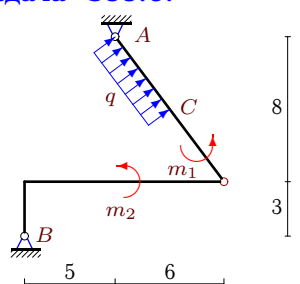
2



$q = 2 \text{ кН/м}, m_1 = 7 \text{ кНм}, m_2 = 20 \text{ кНм}.$

**Задача S33.6.**

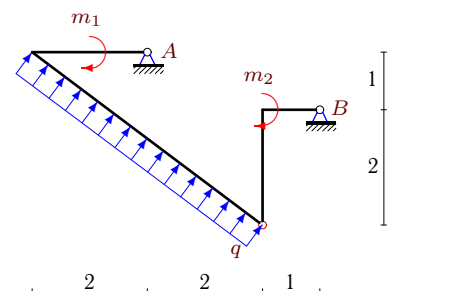
2



$AC = 5 \text{ м}, q = 4 \text{ кН/м}, m_1 = 44 \text{ кНм}, m_2 = 22 \text{ кНм}.$

**Задача S33.7.**

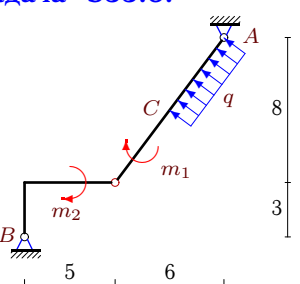
2



$q = 8 \text{ кН/м}, m_1 = 5 \text{ кНм}, m_2 = 65 \text{ кНм}.$

**Задача S33.8.**

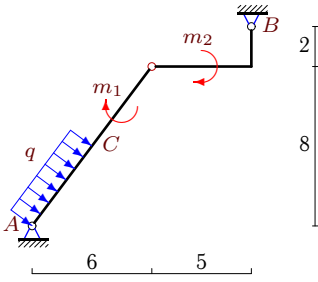
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м}, m_1 = 97 \text{ кНм}, m_2 = 98 \text{ кНм}.$

**Задача S33.9.**

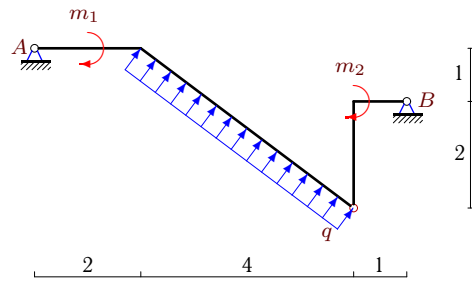
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 47 \text{ кНм}, m_2 = 18 \text{ кНм}.$

**Задача S33.10.**

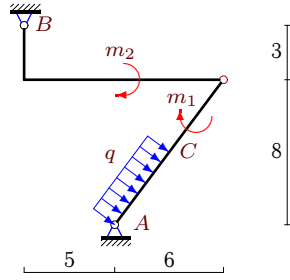
2



$q = 6 \text{ кН/м}, m_1 = 6 \text{ кНм}, m_2 = 28 \text{ кНм}.$

**Задача S33.11.**

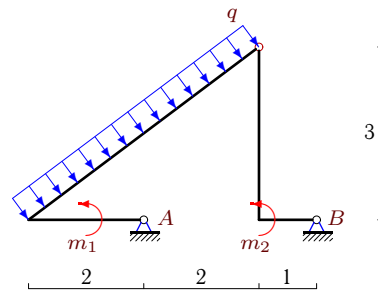
2



$AC = 5 \text{ м}, q = 4 \text{ кН/м},$   
 $m_1 = 256 \text{ кНм}, m_2 = 128 \text{ кНм}.$

**Задача S33.12.**

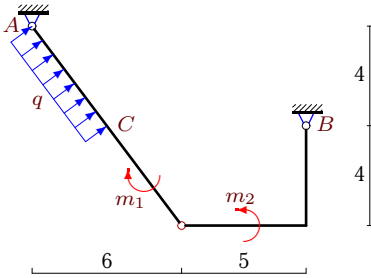
2



$q = 2 \text{ кН/м}, m_1 = 1 \text{ кНм}, m_2 = 23 \text{ кНм}.$

**Задача S33.13.**

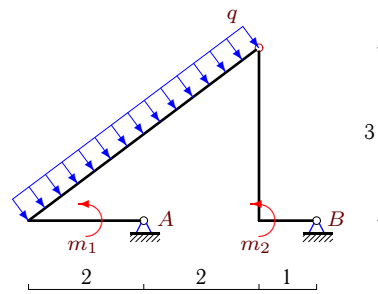
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 53 \text{ кНм}, m_2 = 126 \text{ кНм}.$

**Задача S33.14.**

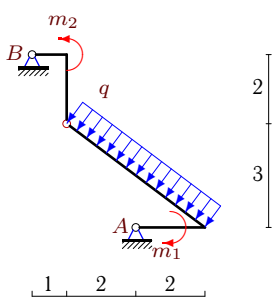
2



$q = 4 \text{ кН/м}, m_1 = 3 \text{ кНм}, m_2 = 51 \text{ кНм}.$

**Задача S33.15.**

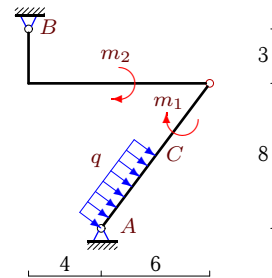
2



$q = 2 \text{ кН/м}, m_1 = 1 \text{ кНм}, m_2 = 7 \text{ кНм}.$

**Задача S33.16.**

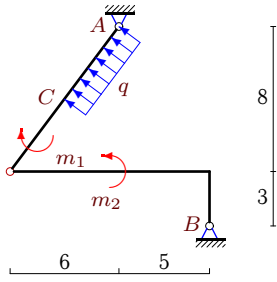
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 173 \text{ кНм}, m_2 = 13 \text{ кНм}.$

**Задача S33.17.**

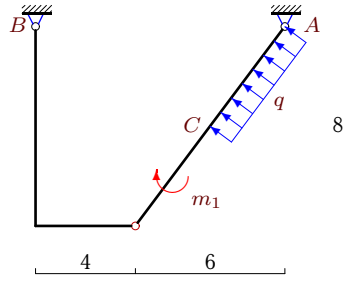
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 181 \text{ кНм}, m_2 = 148 \text{ кНм}.$

**Задача S33.18.**

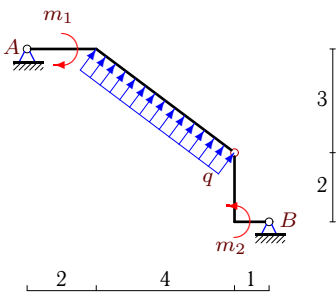
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 35 \text{ кНм},$

**Задача S33.19.**

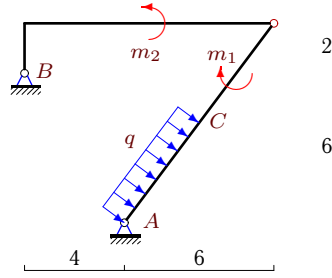
2



$q = 6 \text{ кН/м}, m_1 = 6 \text{ кНм}, m_2 = 48 \text{ кНм}.$

**Задача S33.20.**

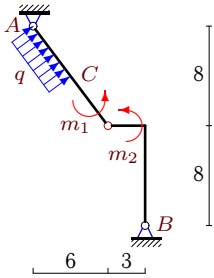
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 211 \text{ кНм}, m_2 = 144 \text{ кНм}.$

**Задача S33.21.**

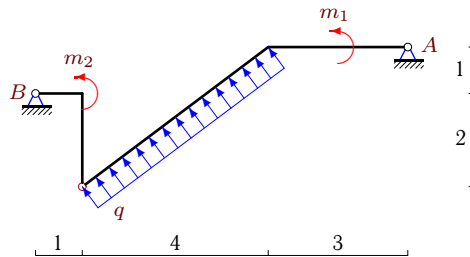
2



$AC = 5 \text{ м}, q = 4 \text{ кН/м},$   
 $m_1 = 174 \text{ кНм}, m_2 = 188 \text{ кНм}.$

**Задача S33.22.**

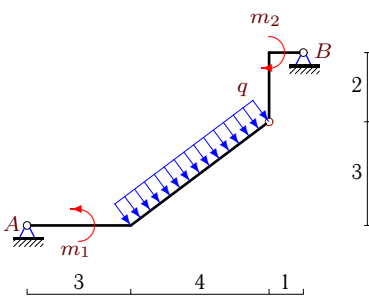
2



$q = 2 \text{ кН/м}, m_1 = 3 \text{ кНм}, m_2 = 8 \text{ кНм}.$

**Задача S33.23.**

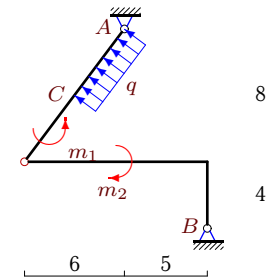
2



$q = 2 \text{ кН/м}, m_1 = 3 \text{ кНм}, m_2 = 16 \text{ кНм}.$

**Задача S33.24.**

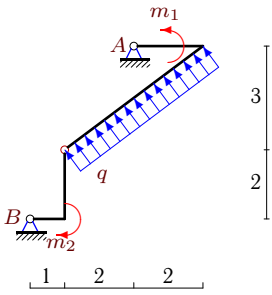
2



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 149 \text{ кНм}, m_2 = 78 \text{ кНм}.$

**Задача S33.25.**

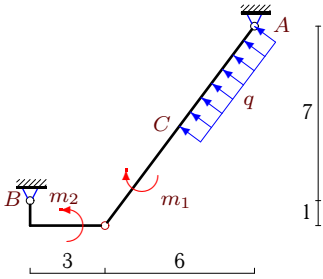
2



$q = 2 \text{ кН/м}$ ,  $m_1 = 1 \text{ кНм}$ ,  $m_2 = 7 \text{ кНм}$ .

**Задача S33.27.**

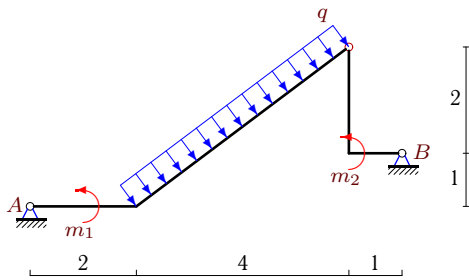
2



$AC = 5 \text{ м}$ ,  $q = 2 \text{ кН/м}$ ,  
 $m_1 = 45 \text{ кНм}$ ,  $m_2 = 50 \text{ кНм}$ .

**Задача S33.29.**

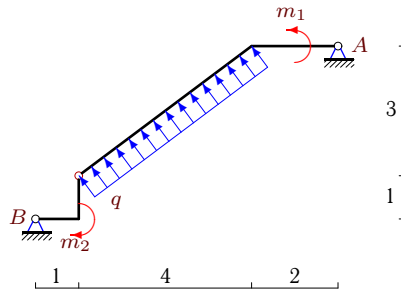
2



$q = 6 \text{ кН/м}$ ,  $m_1 = 3 \text{ кНм}$ ,  $m_2 = 30 \text{ кНм}$ .

**Задача S33.26.**

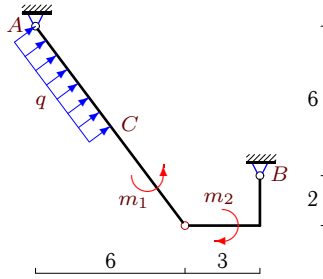
2



$q = 6 \text{ кН/м}$ ,  $m_1 = 3 \text{ кНм}$ ,  $m_2 = 28 \text{ кНм}$ .

**Задача S33.28.**

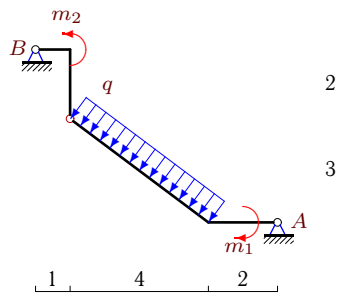
2



$AC = 5 \text{ м}$ ,  $q = 4 \text{ кН/м}$ ,  
 $m_1 = 114 \text{ кНм}$ ,  $m_2 = 32 \text{ кНм}$ .

**Задача S33.30.**

2



$q = 6 \text{ кН/м}$ ,  $m_1 = 6 \text{ кНм}$ ,  $m_2 = 45 \text{ кНм}$ .

**S33 Ответы.****Простая составная рама с распределенной нагрузкой** 10.06.2011

№	$X_A$	$Y_A$	$X_B$	$Y_B$
1	-1	13	-17	11
2	0	13	-6	-5
3	2	-7	10	-9
4	1	-54	-25	22
5	0	4	-6	4
6	-5	-11	-11	-1
7	-1	-51	-23	19
8	7	13	1	-19
9	1	6	-9	0
10	1	-14	-19	-10
11	23	13	-39	-1
12	0	13	-6	-5
13	-22	8	14	-14
14	1	28	-13	-12
15	0	13	6	-5
16	13	1	-21	5
17	-5	11	13	-17
18	5	0	3	-6
19	1	-14	-19	-10
20	14	-4	-22	10
21	3	0	-19	-12
22	0	-4	6	-4
23	0	4	-6	4
24	16	-16	-8	10
25	0	-13	6	5
26	2	-12	16	-12
27	-9	-17	17	11
28	3	-10	-19	-2
29	2	14	-20	10
30	1	13	17	11

S33 файл о33s2A