

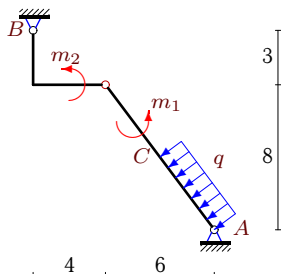
## Простая составная рама с распределенной нагрузкой

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.

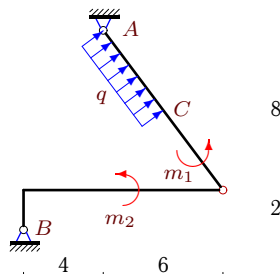
5



$AC = 5$  м,  $q = 2$  кН/м,  
 $m_1 = 89$  кНм,  $m_2 = 34$  кНм.

### Задача S33.2.

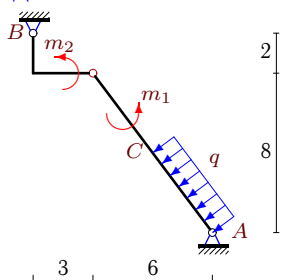
5



$AC = 5$  м,  $q = 2$  кН/м,  
 $m_1 = 121$  кНм,  $m_2 = 2$  кНм.

### Задача S33.3.

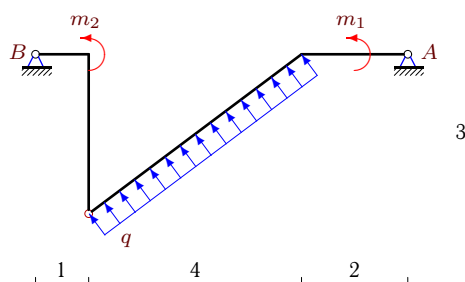
5



$AC = 5$  м,  $q = 4$  кН/м,  
 $m_1 = 138$  кНм,  $m_2 = 44$  кНм.

### Задача S33.4.

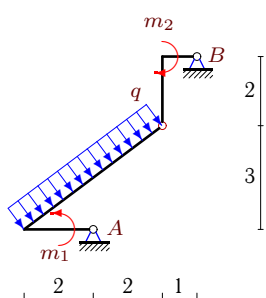
5



$q = 6$  кН/м,  $m_1 = 6$  кНм,  $m_2 = 40$  кНм.

### Задача S33.5.

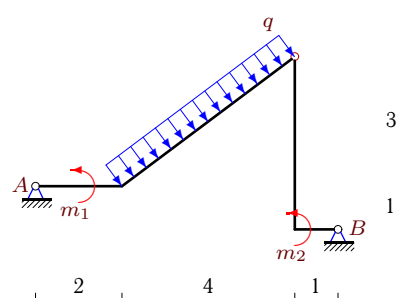
5



$q = 2$  кН/м,  $m_1 = 1$  кНм,  $m_2 = 7$  кНм.

### Задача S33.6.

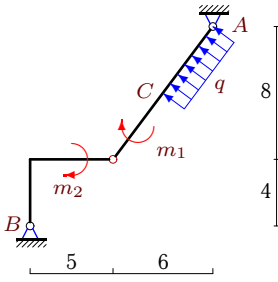
5



$q = 6$  кН/м,  $m_1 = 3$  кНм,  $m_2 = 70$  кНм.

**Задача S33.7.**

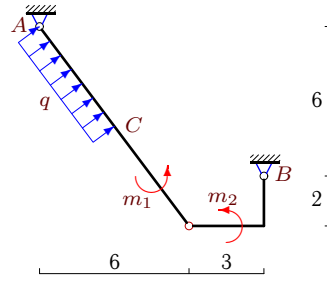
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 107 \text{ кНм}, m_2 = 78 \text{ кНм}.$

**Задача S33.8.**

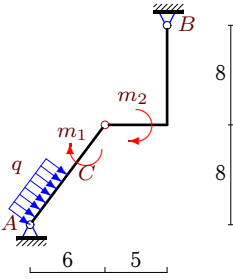
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 3 \text{ кНм}, m_2 = 74 \text{ кНм}.$

**Задача S33.9.**

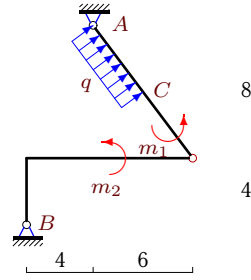
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 67 \text{ кНм}, m_2 = 110 \text{ кНм}.$

**Задача S33.10.**

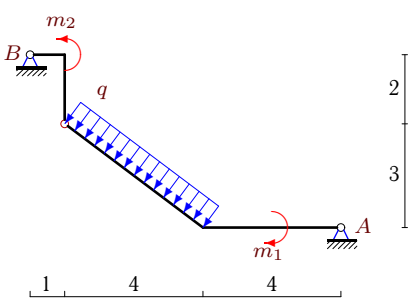
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 179 \text{ кНм}, m_2 = 24 \text{ кНм}.$

**Задача S33.11.**

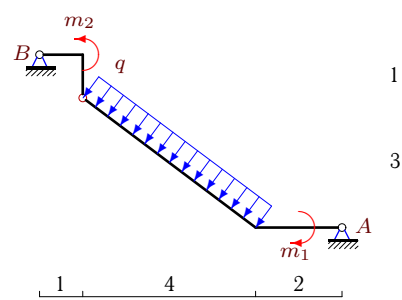
5



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

**Задача S33.12.**

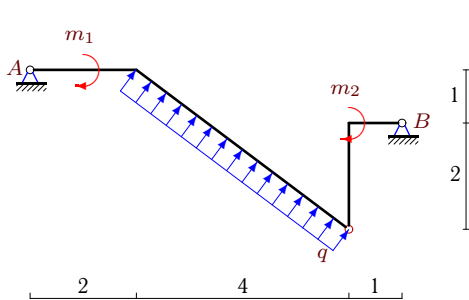
5



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

**Задача S33.13.**

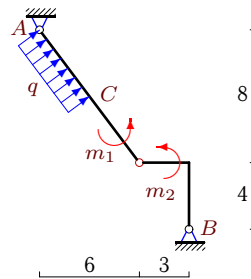
5



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

**Задача S33.14.**

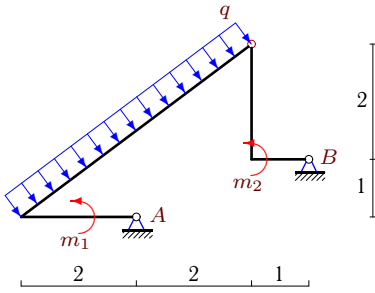
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 75 \text{ кНм}, m_2 = 50 \text{ кНм}.$

**Задача S33.15.**

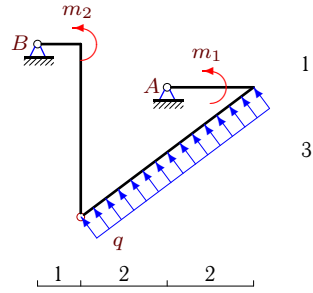
5



$q = 2 \text{ кН/м}, m_1 = 1 \text{ кНм}, m_2 = 17 \text{ кНм}.$

**Задача S33.16.**

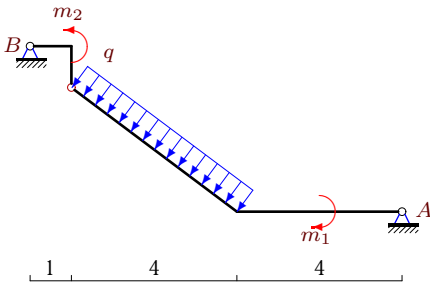
5



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

**Задача S33.17.**

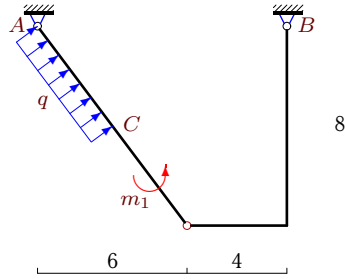
5



$q = 2 \text{ кН/м}, m_1 = 2 \text{ кНм}, m_2 = 10 \text{ кНм}.$

**Задача S33.18.**

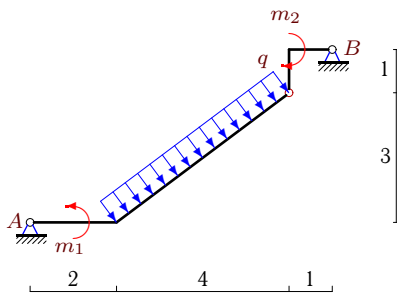
5



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

**Задача S33.19.**

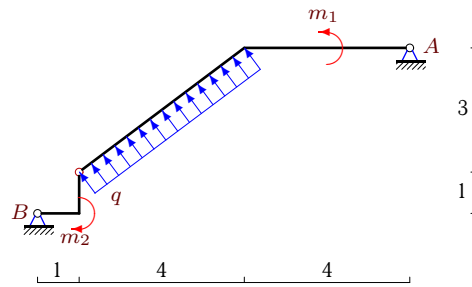
5



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

**Задача S33.20.**

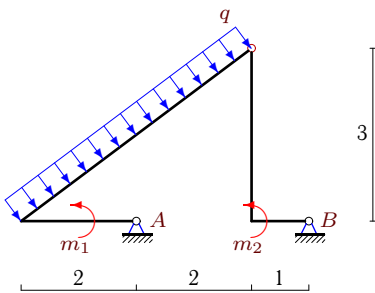
5



$q = 2 \text{ кН/м}, m_1 = 7 \text{ кНм}, m_2 = 10 \text{ кНм}.$

**Задача S33.21.**

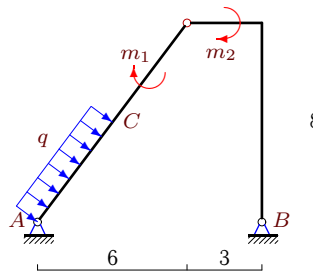
5



$q = 4 \text{ кН/м}, m_1 = 3 \text{ кНм}, m_2 = 42 \text{ кНм}.$

**Задача S33.22.**

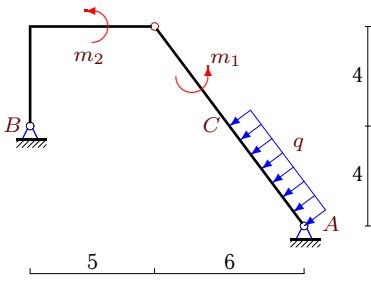
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м}, m_1 = 219 \text{ кНм}, m_2 = 26 \text{ кНм}.$

**Задача S33.23.**

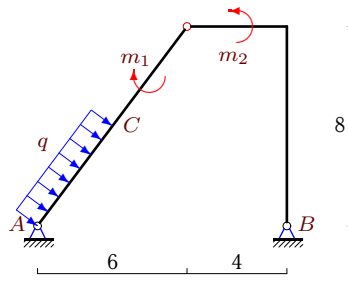
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 203 \text{ кНм}, m_2 = 126 \text{ кНм}.$

**Задача S33.24.**

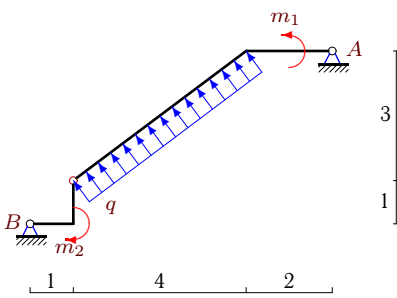
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 115 \text{ кНм}, m_2 = 120 \text{ кНм}.$

**Задача S33.25.**

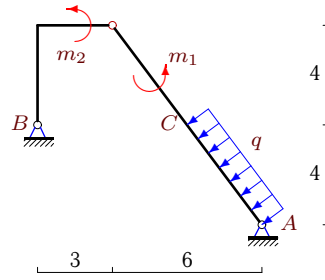
5



$q = 6 \text{ кН/м}, m_1 = 6 \text{ кНм}, m_2 = 29 \text{ кНм}.$

**Задача S33.26.**

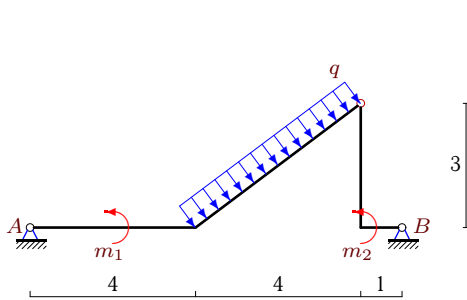
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 123 \text{ кНм}, m_2 = 82 \text{ кНм}.$

**Задача S33.27.**

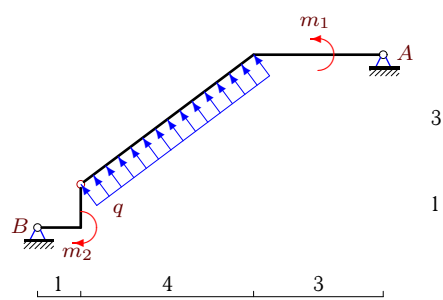
5



$q = 2 \text{ кН/м}, m_1 = 4 \text{ кНм}, m_2 = 17 \text{ кНм}.$

**Задача S33.28.**

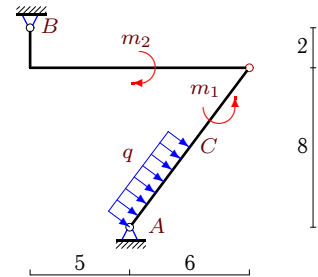
5



$q = 4 \text{ кН/м}, m_1 = 7 \text{ кНм}, m_2 = 21 \text{ кНм}.$

**Задача S33.29.**

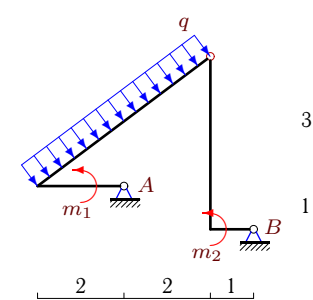
5



$AC = 5 \text{ м}, q = 2 \text{ кН/м},$   
 $m_1 = 125 \text{ кНм}, m_2 = 150 \text{ кНм}.$

**Задача S33.30.**

5



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

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

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

S33 файл о33s5A