

## Система с односторонней связью

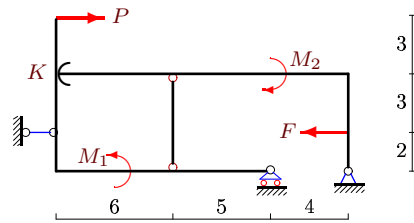
Рама, состоящая из двух частей, содержит одностороннюю связь (гладкая опора в точке  $K$ ). Размеры на рисунке даны в метрах. Для каких значений силы  $F$  система находится в положении равновесия?

Кирсанов М.Н. Теоретическая механика. Сборник задач – М.: Инфра-М, 2014. — 430 с. ISBN 978-5-16-010026-5 (с.82)

Кирсанов М.Н. Решения задач по теоретической механике. – М.: Инфра-М, 2015. — 216 с. ISBN 978-5-16-010558-1 (с.44)

**Задача S-37.1.**

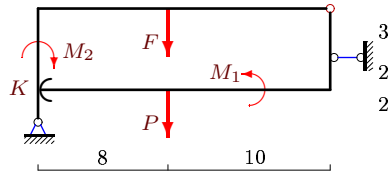
8



$P = 10 \text{ кН}, M_1 = 25 \text{ кНм}, M_2 = 45 \text{ кНм}.$

**Задача S-37.2.**

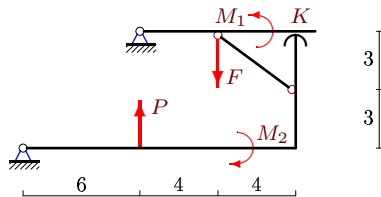
8



$P = 3 \text{ кН}, M_1 = 3 \text{ кНм}, M_2 = 7 \text{ кНм}.$

**Задача S-37.3.**

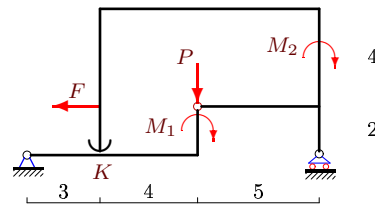
8



$P = 9 \text{ кН}, M_1 = 2 \text{ кНм}, M_2 = 9 \text{ кНм}.$

**Задача S-37.4.**

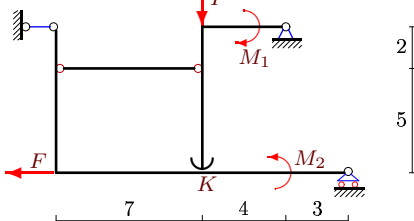
8



$P = 7 \text{ кН}, M_1 = 70 \text{ кНм}, M_2 = 50 \text{ кНм}.$

**Задача S-37.5.**

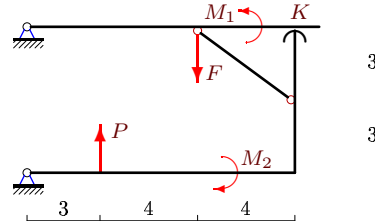
8



$P = 7 \text{ кН}, M_1 = M_2 = 13 \text{ кНм}.$

**Задача S-37.6.**

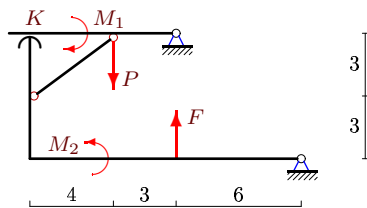
8



$P = 15 \text{ кН}, M_1 = 7 \text{ кНм}, M_2 = 15 \text{ кНм}.$

**Задача S-37.7.**

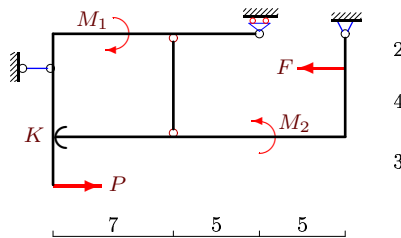
8



$P = 12 \text{ кН}, M_1 = 3 \text{ кНм}, M_2 = 17 \text{ кНм}.$

**Задача S-37.8.**

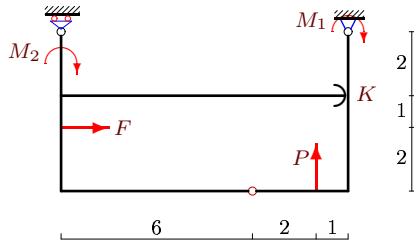
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$P = 2 \text{ кН}, M_1 = 5 \text{ кНм}, M_2 = 10 \text{ кНм}.$

**Задача S-37.9.**

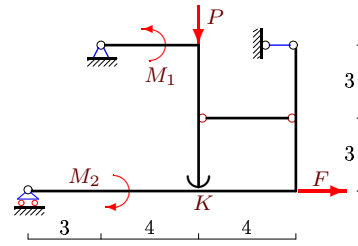
8



$P = 6 \text{ кН}, M_1 = 1 \text{ кНм}, M_2 = 2 \text{ кНм}.$

**Задача S-37.10.**

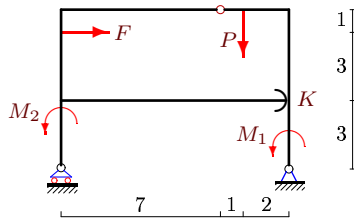
8



$P = 6 \text{ кН}, M_1 = M_2 = 11 \text{ кНм}.$

**Задача S-37.11.**

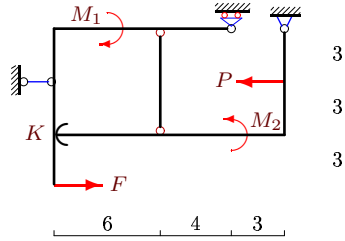
8



$P = 26 \text{ кН}, M_1 = 6 \text{ кНм}, M_2 = 14 \text{ кНм}.$

**Задача S-37.12.**

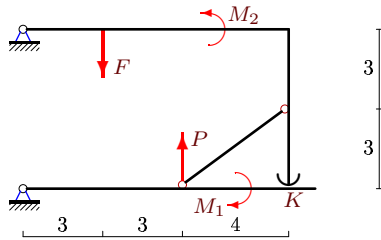
8



$P = 21 \text{ кН}, M_1 = 8 \text{ кНм}, M_2 = 14 \text{ кНм}.$

**Задача S-37.13.**

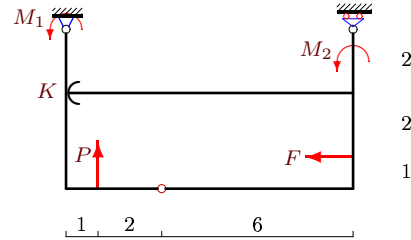
8



$P = 3 \text{ кН}, M_1 = 3 \text{ кНм}, M_2 = 7 \text{ кНм}.$

**Задача S-37.14.**

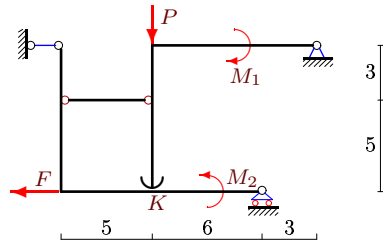
8



$P = 11 \text{ кН}, M_1 = 2 \text{ кНм}, M_2 = 4 \text{ кНм}.$

**Задача S-37.15.**

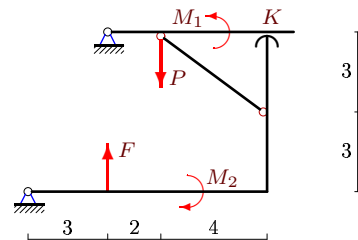
8



$P = 8 \text{ кН}, M_1 = M_2 = 16 \text{ кНм}.$

**Задача S-37.16.**

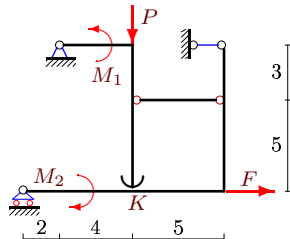
8



$P = 6 \text{ кН}, M_1 = 2 \text{ кНм}, M_2 = 13 \text{ кНм}.$

**Задача S-37.17.**

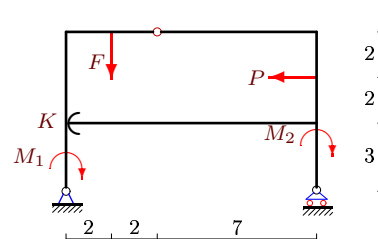
8



$P = 4 \text{ кН}, M_1 = M_2 = 4 \text{ кНм}.$

**Задача S-37.18.**

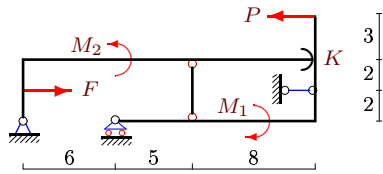
8



$P = 14 \text{ кН}, M_1 = 32 \text{ кНм}, M_2 = 56 \text{ кНм}.$

Задача S-37.19.

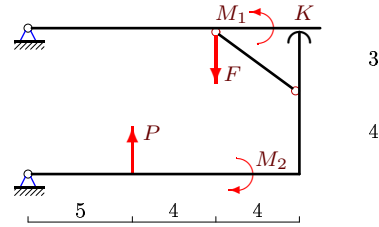
8



$P = 10 \text{ кН}, M_1 = 15 \text{ кНм}, M_2 = 33 \text{ кНм}.$

Задача S-37.20.

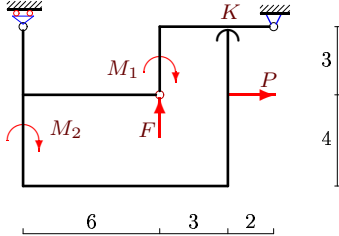
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$P = 55 \text{ кН}, M_1 = 27 \text{ кНм}, M_2 = 55 \text{ кНм}.$

Задача S-37.21.

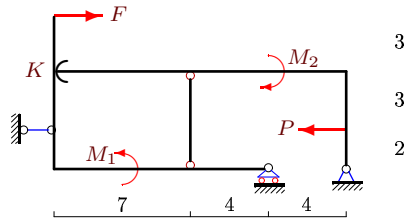
8



$P = 10 \text{ кН}, M_1 = 15 \text{ кНм}, M_2 = 18 \text{ кНм}.$

Задача S-37.22.

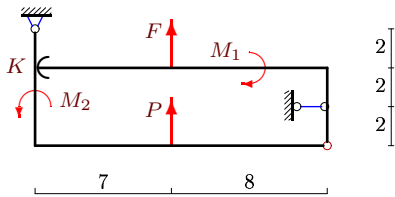
8



$P = 12 \text{ кН}, M_1 = 3 \text{ кНм}, M_2 = 6 \text{ кНм}.$

Задача S-37.23.

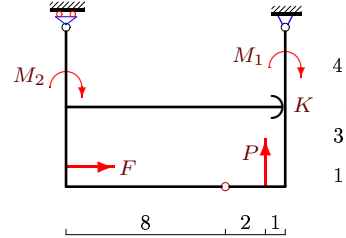
8



$P = 9 \text{ кН}, M_1 = 2 \text{ кНм}, M_2 = 6 \text{ кНм}.$

Задача S-37.24.

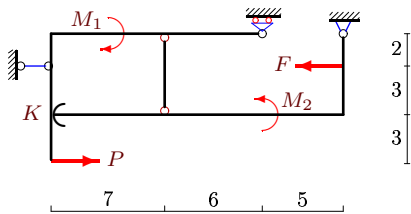
8



$P = 67 \text{ кН}, M_1 = 21 \text{ кНм}, M_2 = 56 \text{ кНм}.$

Задача S-37.25.

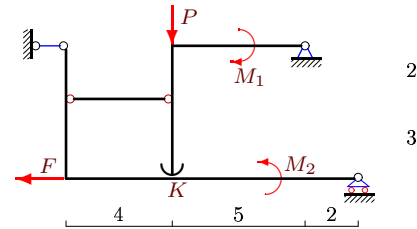
8



$P = 6 \text{ кН}, M_1 = 12 \text{ кНм}, M_2 = 22 \text{ кНм}.$

Задача S-37.26.

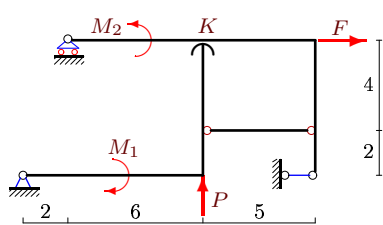
8



$P = 5 \text{ кН}, M_1 = M_2 = 11 \text{ кНм}.$

Задача S-37.27.

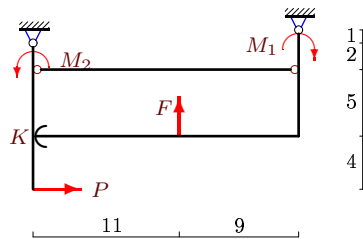
8



$P = 6 \text{ кН}, M_1 = M_2 = 13 \text{ кНм}.$

Задача S-37.28.

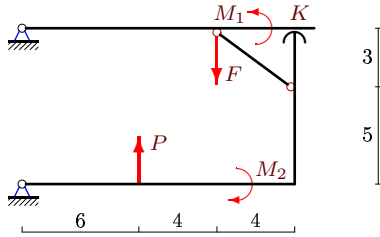
8



$P = 18 \text{ кН}, M_1 = 6 \text{ кНм}, M_2 = 4 \text{ кНм}.$

Задача S-37.29.

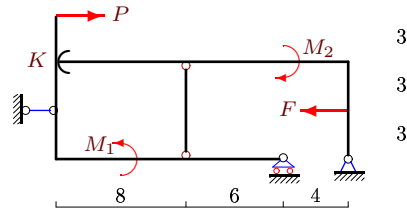
8



$P = 31 \text{ кН}, M_1 = 30 \text{ кНм}, M_2 = 62 \text{ кНм}.$

Задача S-37.30.

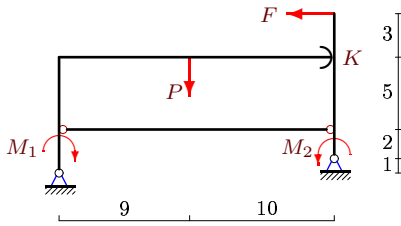
8



$P = 9 \text{ кН}, M_1 = 6 \text{ кНм}, M_2 = 10 \text{ кНм}.$

Задача S-37.31.

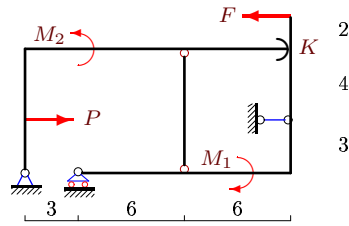
8



$P = 15 \text{ кН}, M_1 = 6 \text{ кНм}, M_2 = 4 \text{ кНм}.$

Задача S-37.32.

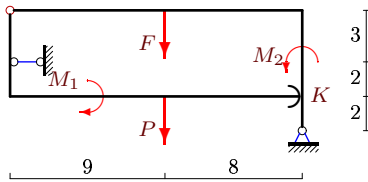
8



$P = 18 \text{ кН}, M_1 = 10 \text{ кНм}, M_2 = 15 \text{ кНм}.$

Задача S-37.33.

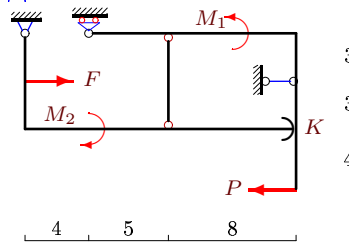
8



$P = 4 \text{ кН}, M_1 = 3 \text{ кНм}, M_2 = 7 \text{ кНм}.$

Задача S-37.34.

8



$P = 5 \text{ кН}, M_1 = 5 \text{ кНм}, M_2 = 9 \text{ кНм}.$

**Ответы.****Система с односторонней связью**

16.02.2015

№	$F$
1	$F < 54 \text{ кН}$
2	$F > 2 \text{ кН}$
3	$F > 3 \text{ кН}$
4	$F < 2 \text{ кН}$
5	$F < 4 \text{ кН}$
6	$F > 3 \text{ кН}$
7	$F < 34 \text{ кН}$
8	$F < 14 \text{ кН}$
9	$F > 1 \text{ кН}$
10	$F < 4 \text{ кН}$
11	$F > 7 \text{ кН}$
12	$F > 6 \text{ кН}$
13	$F < 14 \text{ кН}$
14	$F > 2 \text{ кН}$
15	$F < 9 \text{ кН}$
16	$F < 26 \text{ кН}$
17	$F < 2 \text{ кН}$
18	$F < 57 \text{ кН}$
19	$F < 55 \text{ кН}$
20	$F > 15 \text{ кН}$
21	$F > 6 \text{ кН}$
22	$F > 2 \text{ кН}$
23	$F < 7 \text{ кН}$
24	$F > 8 \text{ кН}$
25	$F < 33 \text{ кН}$
26	$F < 5 \text{ кН}$
27	$F < 8 \text{ кН}$
28	$F < 33 \text{ кН}$
29	$F > 9 \text{ кН}$
30	$F < 30 \text{ кН}$
31	$F > 9 \text{ кН}$
32	$F > 6 \text{ кН}$
33	$F > 2 \text{ кН}$
34	$F < 21 \text{ кН}$