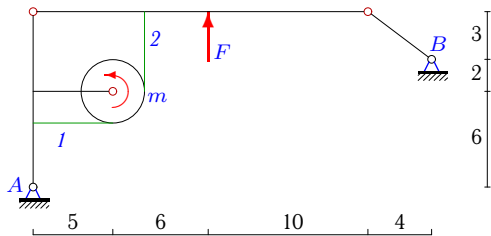


Составная конструкция из трех тел с нитью

Определить реакции опор конструкции (в кН) и натяжения частей нити. Нить огибает цилиндр весом G и соединяет части конструкции. Размеры даны в метрах. Конструкция расположена в вертикальной плоскости.

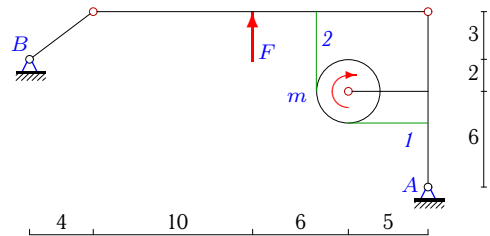
Кирсанов М.Н. Задачи по теоретической механике с решениями в **Maple 11**. – М.: ФИЗМАТЛИТ, 2010. – 264 с. (с.15)

Задача S30.1.



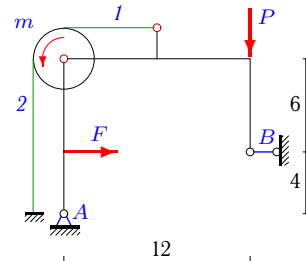
$G = 148$ кН, $F = 77$ кН, $m = 214$ кНм,
 $r = 2$ м.

Задача S30.2.



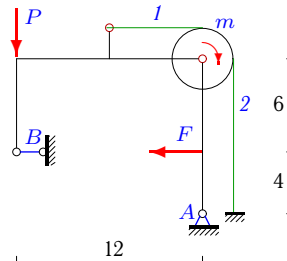
$G = 148$ кН, $F = 77$ кН, $m = 214$ кНм,
 $r = 2$ м.

Задача S30.3.



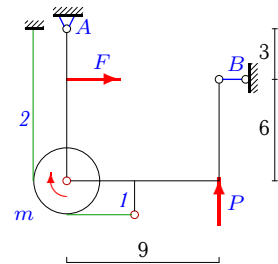
$G = 2$ кН, $F = 15$ кН, $m = 4$ кНм,
 $P = 2$ кН, $r = 2$ м.

Задача S30.4.



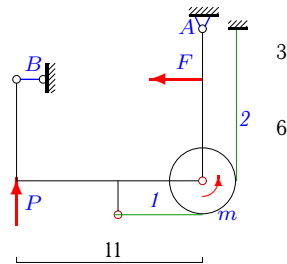
$G = 7$ кН, $F = 30$ кН, $m = 8$ кНм,
 $P = 4$ кН, $r = 2$ м.

Задача S30.5.



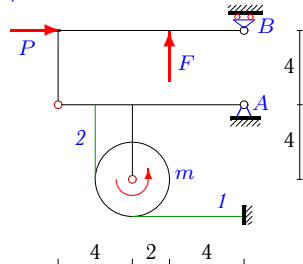
$G = 9$ кН, $F = 9$ кН, $m = 2$ кНм, $P = 2$ кН, $r = 2$ м.

Задача S30.6.



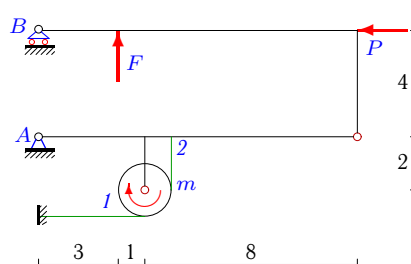
$G = 13$ кН, $F = 27$ кН, $m = 6$ кНм,
 $P = 2$ кН, $r = 2$ м.

Задача S30.7.



$G = 13$ кН, $F = 20$ кН, $m = 58$ кНм,
 $P = 20$ кН, $r = 2$ м.

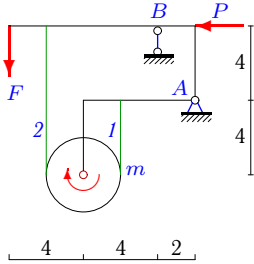
Задача S30.8.



$G = 17$ кН, $F = 12$ кН, $m = 238$ кНм,
 $P = 72$ кН, $r = 1$ м.

Задача S30.17.

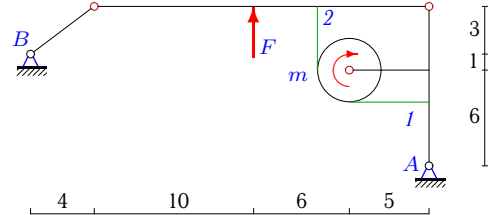
1



$G = 7 \text{ кН}, F = 4 \text{ кН}, m = 26 \text{ кНм},$
 $P = 5 \text{ кН}, r = 2 \text{ м}.$

Задача S30.18.

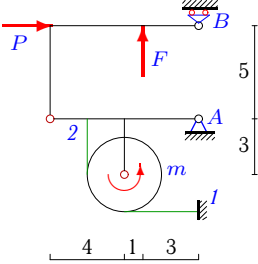
1



$G = 53 \text{ кН}, F = 28 \text{ кН}, m = 60 \text{ кНм},$
 $r = 2 \text{ м}.$

Задача S30.19.

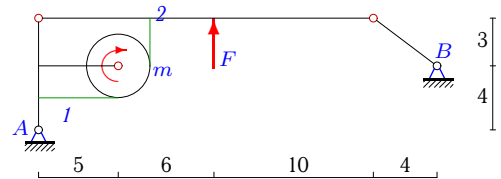
1



$G = 20 \text{ кН}, F = 16 \text{ кН}, m = 18 \text{ кНм},$
 $P = 16 \text{ кН}, r = 2 \text{ м}.$

Задача S30.20.

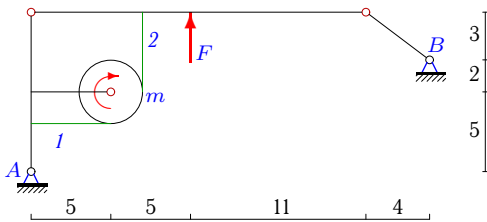
1



$G = 64 \text{ кН}, F = 35 \text{ кН}, m = 26 \text{ кНм},$
 $r = 2 \text{ м}.$

Задача S30.21.

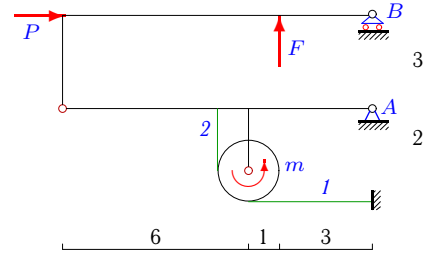
1



$G = 29 \text{ кН}, F = 14 \text{ кН}, m = 108 \text{ кНм},$
 $r = 2 \text{ м}.$

Задача S30.22.

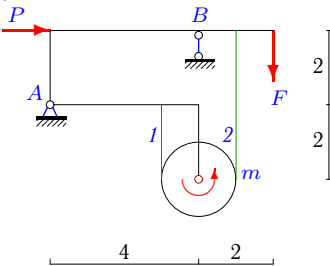
1



$G = 23 \text{ кН}, F = 10 \text{ кН}, m = 46 \text{ кНм},$
 $P = 40 \text{ кН}, r = 1 \text{ м}.$

Задача S30.23.

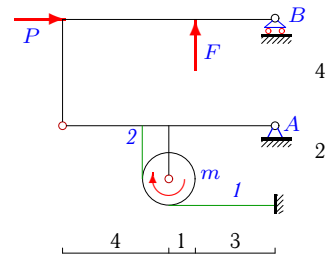
1



$G = 48 \text{ кН}, F = 8 \text{ кН}, m = 172 \text{ кНм},$
 $P = 12 \text{ кН}, r = 1 \text{ м}.$

Задача S30.24.

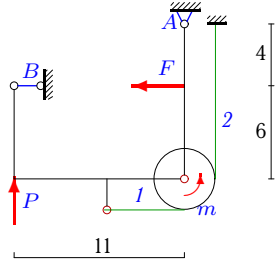
1



$G = 19 \text{ кН}, F = 8 \text{ кН}, m = 6 \text{ кНм},$
 $P = 16 \text{ кН}, r = 1 \text{ м}.$

Задача S30.25.

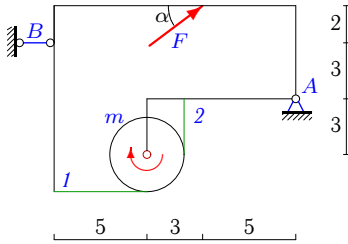
1



$G = 15 \text{ кН}, F = 20 \text{ кН}, m = 6 \text{ кНм},$
 $P = 4 \text{ кН}, r = 2 \text{ м}.$

Задача S30.27.

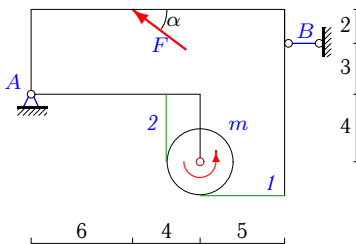
1



$G = 26 \text{ кН}, F = 15 \text{ кН}, m = 178 \text{ кНм},$
 $r = 2 \text{ м}, \cos \alpha = 0.8.$

Задача S30.29.

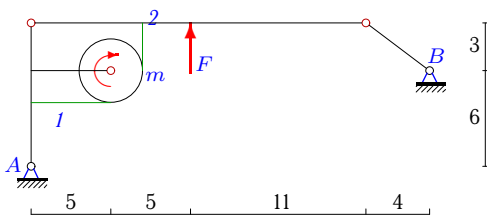
1



$G = 28 \text{ кН}, F = 15 \text{ кН}, m = 208 \text{ кНм},$
 $r = 2 \text{ м}, \cos \alpha = 0.8.$

Задача S30.31.

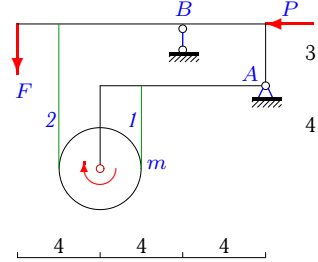
1



$G = 49 \text{ кН}, F = 28 \text{ кН}, m = 64 \text{ кНм},$
 $r = 2 \text{ м}.$

Задача S30.26.

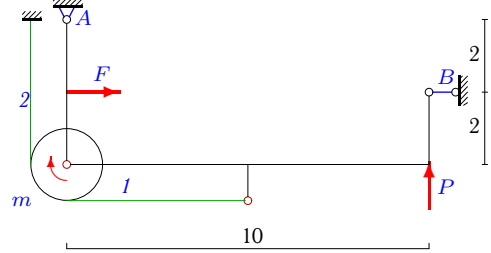
1



$G = 7 \text{ кН}, F = 4 \text{ кН}, m = 36 \text{ кНм},$
 $P = 4 \text{ кН}, r = 2 \text{ м}.$

Задача S30.28.

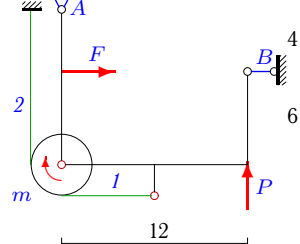
1



$G = 10 \text{ кН}, F = 12 \text{ кН}, m = 3 \text{ кНм},$
 $P = 1 \text{ кН}, r = 1 \text{ м}.$

Задача S30.30.

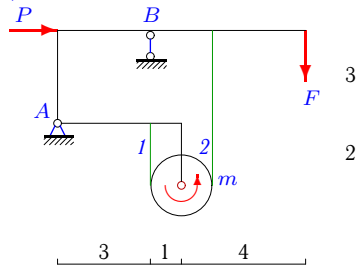
1



$G = 11 \text{ кН}, F = 30 \text{ кН}, m = 8 \text{ кНм},$
 $P = 4 \text{ кН}, r = 2 \text{ м}.$

Задача S30.32.

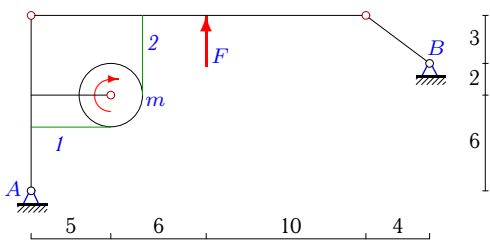
1



$G = 42 \text{ кН}, F = 12 \text{ кН}, m = 123 \text{ кНм},$
 $P = 15 \text{ кН}, r = 1 \text{ м}.$

Задача S30.33.

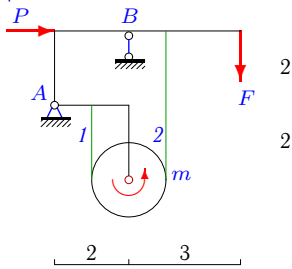
1



$G = 148 \text{ кН}$, $F = 77 \text{ кН}$, $m = 214 \text{ кНм}$,
 $r = 2 \text{ м}$.

Задача S30.34.

1



$G = 8 \text{ кН}$, $F = 6 \text{ кН}$, $m = 4 \text{ кНм}$,
 $P = 4 \text{ кН}$, $r = 1 \text{ м}$.

S30 серия 1

Составная конструкция из трех тел с нитью

06.03.2011

	X_A	Y_A	R_B	S_1	S_2
1	-12	80	-15	201	94
2	12	80	-15	201	94
3	-9	32	-6	30	28
4	-18	67	12	60	56
5	-6	10	-3	18	17
6	-18	24	9	38	35
7	-24	-3	-4	4	33
8	78	-10	15	6	244
9	-16	-47	67	20	4
10	12	-5	45	100	8
11	-13	15	21	4	78
12	-23	9	-3	30	69
13	-15	11	5	30	81
14	-12	48	-15	252	38
15	-52	-1	4	4	90
16	76	-6	9	4	184
17	5	-27	38	15	2
18	4	28	-5	65	35
19	-22	4	0	6	15
20	-4	32	-5	59	46
21	-4	18	-5	65	11
22	-44	8	5	4	50
23	-12	33	23	176	4
24	-22	8	3	6	0
25	-12	32	8	46	43
26	4	-9	20	20	2
27	-37	17	-25	6	95
28	-6	10	-6	22	19
29	-2	19	14	12	116
30	-18	49	-12	60	56
31	-4	24	-5	63	31
32	-15	-8	62	132	9
33	-12	80	-15	201	94
34	-4	-11	25	8	4

S30 серия 1