

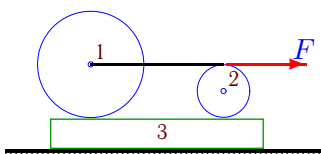
Уравнение Лагранжа 2-го рода

Механическая система из двух однородных цилиндров 1 и 2 и бруска 3 с идеальными стационарными связями имеет две степени свободы и движется под действием силы F . Трением пренебречь. Массы даны в килограммах, сила — в ньютонах. Найти ускорение бруска, скользящего по гладкой поверхности.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.— М.:ФИЗМАТЛИТ, 2008.— 384 с. (с.300.)

Задача 14.1.

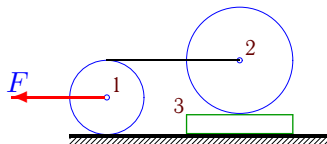
3



$$F = 97, m_1 = 1, m_2 = 3, m_3 = 3.$$

Задача 14.2.

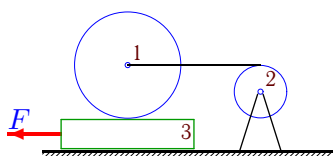
3



$$F = 105, m_1 = 1, m_2 = 3, m_3 = 3.$$

Задача 14.3.

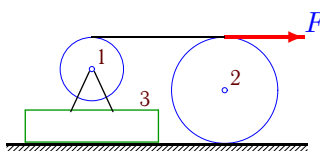
3



$$F = 41, m_1 = 3, m_2 = 3, m_3 = 4.$$

Задача 14.4.

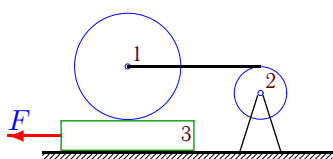
3



$$F = 65, m_1 = 3, m_2 = 3, m_3 = 1.$$

Задача 14.5.

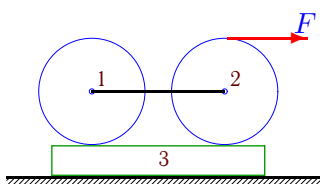
3



$$F = 23, m_1 = 3, m_2 = 2, m_3 = 1.$$

Задача 14.6.

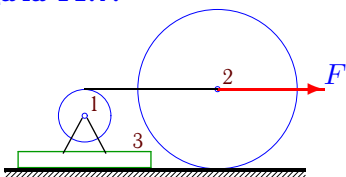
3



$$F = 12, m_1 = 1, m_2 = 2, m_3 = 3.$$

Задача 14.7.

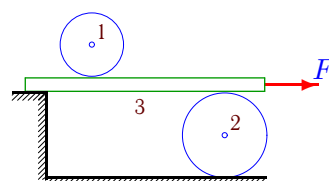
3



$$F = 23, m_1 = 2, m_2 = 1, m_3 = 2.$$

Задача 14.8.

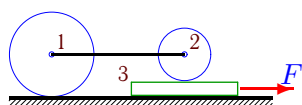
3



$$F = 89, m_1 = 1, m_2 = 1, m_3 = 3.$$

Задача 14.9.

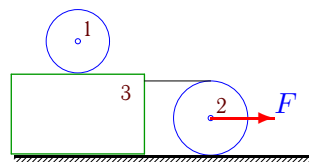
3



$$F = 17, m_1 = 1, m_2 = 3, m_3 = 1.$$

Задача 14.10.

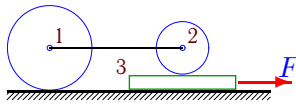
3



$$F = 25, m_1 = 1, m_2 = 2, m_3 = 1.$$

Задача 14.11.

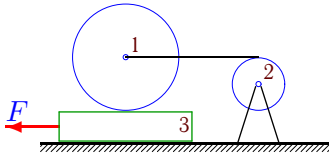
3



$F = 16, m_1 = 1, m_2 = 2, m_3 = 1.$

Задача 14.13.

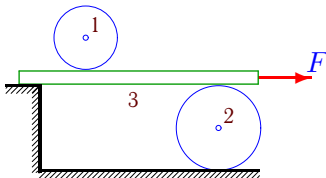
3



$F = 19, m_1 = 2, m_2 = 1, m_3 = 2.$

Задача 14.15.

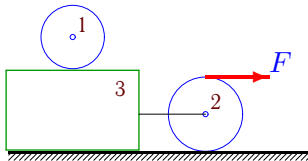
3



$F = 11, m_1 = 3, m_2 = 2, m_3 = 1.$

Задача 14.17.

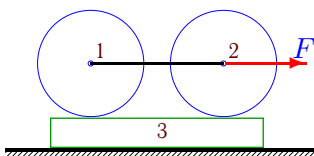
3



$F = 8, m_1 = 1, m_2 = 2, m_3 = 2.$

Задача 14.19.

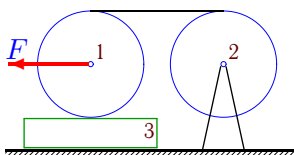
3



$F = 8, m_1 = 1, m_2 = 1, m_3 = 2.$

Задача 14.21.

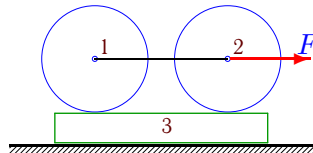
3



$F = 26, m_1 = 2, m_2 = 2, m_3 = 3.$

Задача 14.12.

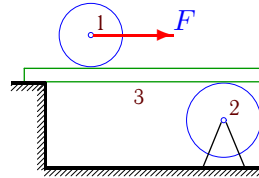
3



$F = 14, m_1 = 3, m_2 = 2, m_3 = 3.$

Задача 14.14.

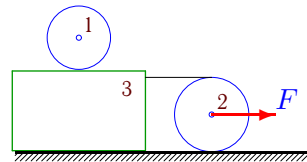
3



$F = 12, m_1 = 3, m_2 = 2, m_3 = 2.$

Задача 14.16.

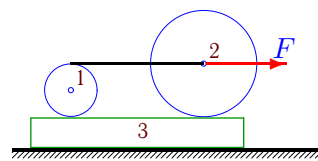
3



$F = 49, m_1 = 3, m_2 = 3, m_3 = 4.$

Задача 14.18.

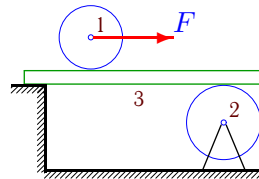
3



$F = 23, m_1 = 2, m_2 = 2, m_3 = 3.$

Задача 14.20.

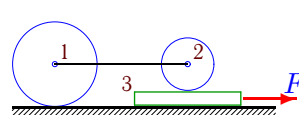
3



$F = 14, m_1 = 2, m_2 = 2, m_3 = 3.$

Задача 14.22.

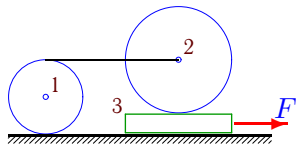
3



$F = 22, m_1 = 2, m_2 = 1, m_3 = 2.$

Задача 14.23.

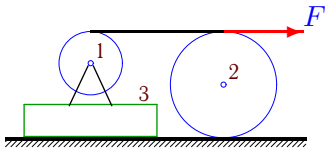
3



$F = 143, m_1 = 3, m_2 = 1, m_3 = 3.$

Задача 14.25.

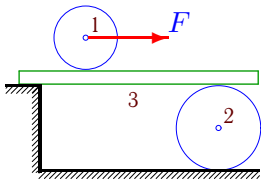
3



$F = 15, m_1 = 2, m_2 = 3, m_3 = 1.$

Задача 14.27.

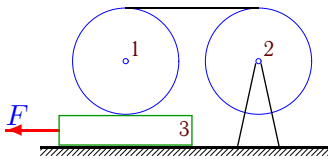
3



$F = 97, m_1 = 2, m_2 = 1, m_3 = 3.$

Задача 14.29.

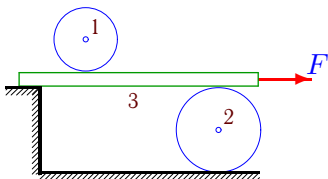
3



$F = 31, m_1 = 2, m_2 = 3, m_3 = 1.$

Задача 14.31.

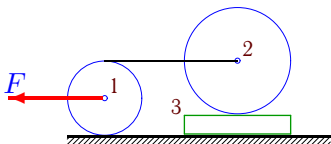
3



$F = 65, m_1 = 1, m_2 = 1, m_3 = 2.$

Задача 14.33.

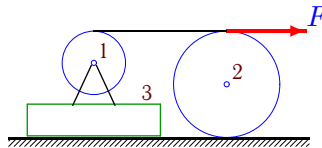
3



$F = 63, m_1 = 3, m_2 = 3, m_3 = 1.$

Задача 14.24.

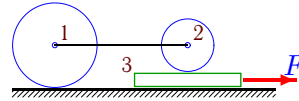
3



$F = 27, m_1 = 3, m_2 = 2, m_3 = 1.$

Задача 14.26.

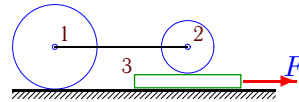
3



$F = 25, m_1 = 1, m_2 = 2, m_3 = 2.$

Задача 14.28.

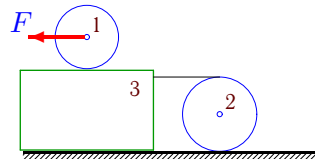
3



$F = 21, m_1 = 2, m_2 = 3, m_3 = 3.$

Задача 14.30.

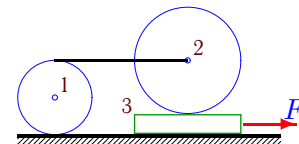
3



$F = 49, m_1 = 2, m_2 = 1, m_3 = 1.$

Задача 14.32.

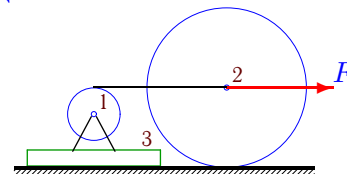
3



$F = 31, m_1 = 3, m_2 = 3, m_3 = 2.$

Задача 14.34.

3



$F = 53, m_1 = 2, m_2 = 3, m_3 = 2.$

Уравнение Лагранжа 2-го рода

№	a
1	1
2	-4
3	-8
4	8
5	-11
6	-1
7	2
8	24
9	8
10	6
11	9
12	1
13	-7
14	1
15	4
16	4
17	3
18	1
19	1
20	1
21	-3
22	9
23	42
24	4
25	2
26	9
27	8
28	5
29	-18
30	-8
31	24
32	10
33	-4
34	2