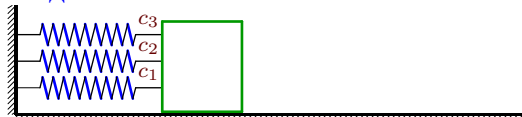


Свободное колебание точки

Груз массой m расположен на гладкой горизонтальной плоскости и скреплен с тремя пружинами, жесткости которых заданы. Определить частоту собственных колебаний груза. Массой пружин пренебречь. В ответах дана приведенная жесткость пружин c_0 и частота k .

Задача D23.1.

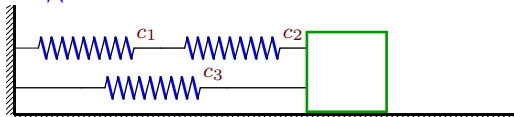
2



$$c_1 = 2 \text{ Н/м}, c_2 = 4 \text{ Н/м}, \\ c_3 = 1 \text{ Н/м}, m = 8 \text{ кг}.$$

Задача D23.2.

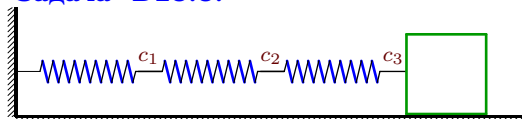
2



$$c_1 = 5 \text{ Н/м}, c_2 = 3 \text{ Н/м}, \\ c_3 = 2 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.3.

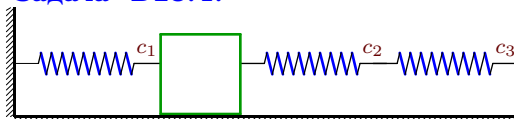
2



$$c_1 = 5 \text{ Н/м}, c_2 = 3 \text{ Н/м}, \\ c_3 = 2 \text{ Н/м}, m = 3 \text{ кг}.$$

Задача D23.4.

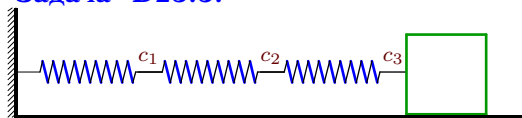
2



$$c_1 = 3 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 7 \text{ кг}.$$

Задача D23.5.

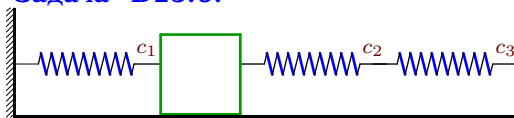
2



$$c_1 = 1 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 1 \text{ Н/м}, m = 5 \text{ кг}.$$

Задача D23.6.

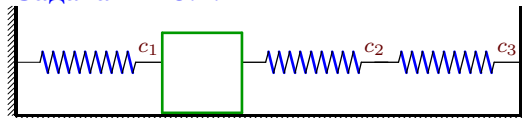
2



$$c_1 = 4 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 4 \text{ Н/м}, m = 7 \text{ кг}.$$

Задача D23.7.

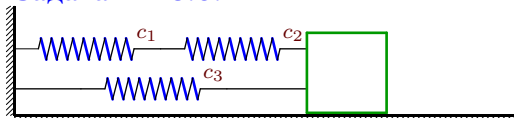
2



$$c_1 = 3 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 7 \text{ кг}.$$

Задача D23.8.

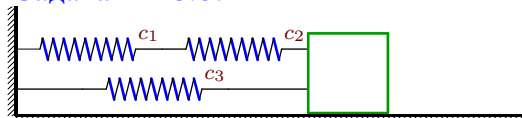
2



$$c_1 = 1 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 5 \text{ кг}.$$

Задача D23.9.

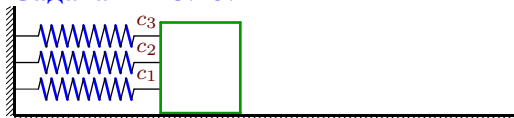
2



$$c_1 = 4 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 8 \text{ кг}.$$

Задача D23.10.

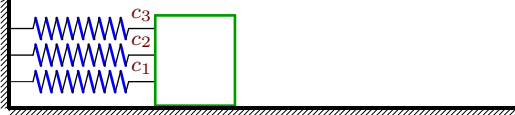
2



$$c_1 = 3 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.11.

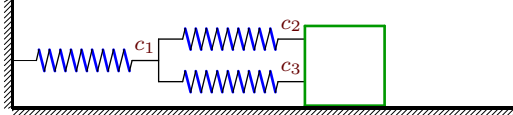
2



$$c_1 = 4 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 2 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.12.

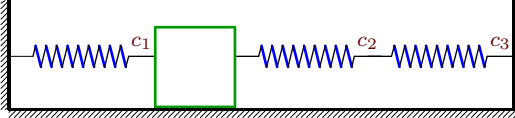
2



$$c_1 = 4 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.13.

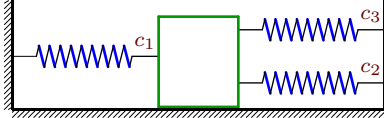
2



$$c_1 = 1 \text{ Н/м}, c_2 = 3 \text{ Н/м}, \\ c_3 = 4 \text{ Н/м}, m = 6 \text{ кг}.$$

Задача D23.14.

2



$$c_1 = 5 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.15.

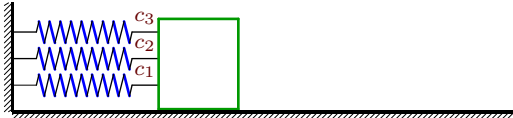
2



$$c_1 = 8 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.16.

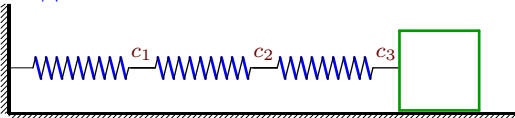
2



$$c_1 = 4 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 6 \text{ кг}.$$

Задача D23.17.

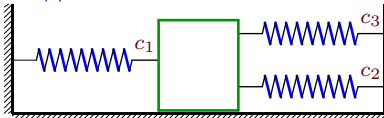
2



$$c_1 = 3 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 6 \text{ кг}.$$

Задача D23.18.

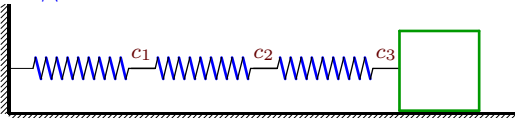
2



$$c_1 = 3 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 1 \text{ кг}.$$

Задача D23.19.

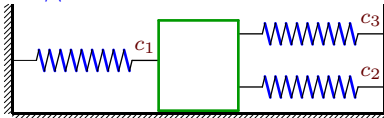
2



$$c_1 = 8 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 1 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.20.

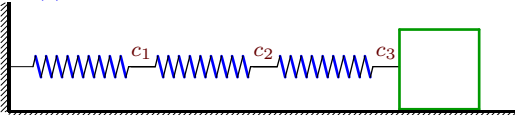
2



$$c_1 = 1 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 1 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.21.

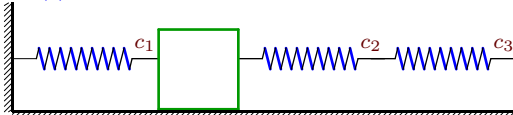
2



$$c_1 = 4 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.22.

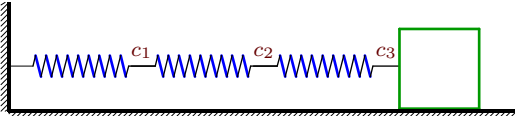
2



$$c_1 = 1 \text{ Н/м}, c_2 = 7 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 6 \text{ кг}.$$

Задача D23.23.

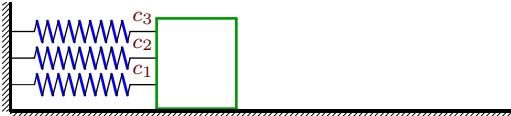
2



$$c_1 = 2 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.24.

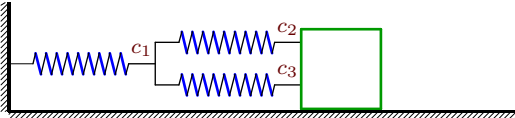
2



$$c_1 = 5 \text{ Н/м}, c_2 = 4 \text{ Н/м}, \\ c_3 = 1 \text{ Н/м}, m = 3 \text{ кг}.$$

Задача D23.25.

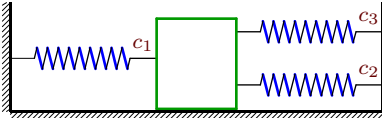
2



$$c_1 = 4 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 8 \text{ кг}.$$

Задача D23.26.

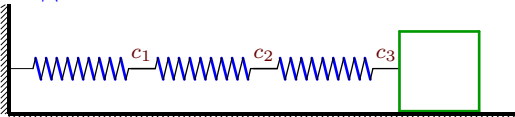
2



$$c_1 = 4 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.27.

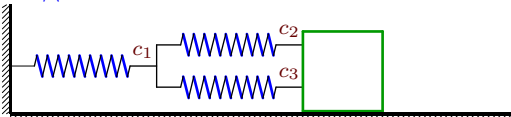
2



$$c_1 = 5 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 4 \text{ Н/м}, m = 7 \text{ кг}.$$

Задача D23.28.

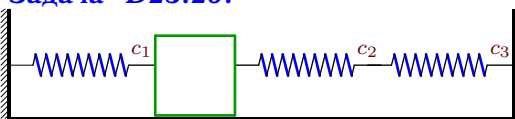
2



$$c_1 = 3 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.29.

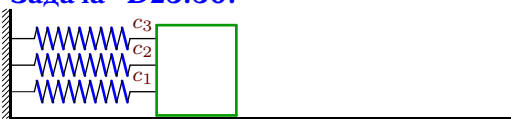
2



$$c_1 = 2 \text{ Н/м}, c_2 = 7 \text{ Н/м}, \\ c_3 = 2 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.30.

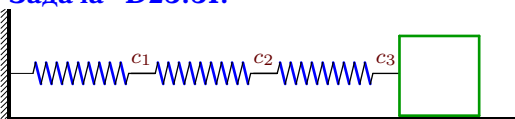
2



$$c_1 = 1 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.31.

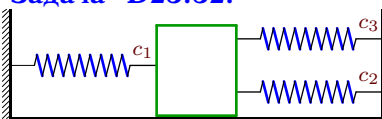
2



$$c_1 = 5 \text{ Н/м}, c_2 = 3 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 5 \text{ кг}.$$

Задача D23.32.

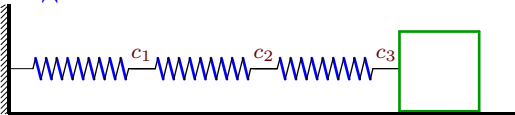
2



$$c_1 = 2 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 4 \text{ кг}.$$

Задача D23.33.

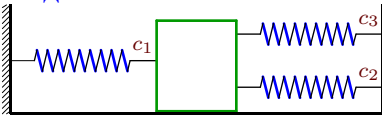
2



$$c_1 = 1 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 1 \text{ кг}.$$

Задача D23.34.

2



$$c_1 = 4 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 2 \text{ кг}.$$

D23 Ответы.**Свободное колебание точки**

23.03.2012

№	c_0 , Н/м	k , с^{-1}
1	7.000	0.935
2	3.875	0.984
3	0.968	0.568
4	4.875	0.835
5	0.455	0.302
6	5.333	0.873
7	4.875	0.835
8	3.833	0.876
9	4.333	0.736
10	10.000	1.054
11	7.000	1.323
12	0.375	0.433
13	2.714	0.673
14	12.000	1.732
15	19.000	1.453
16	11.000	1.354
17	1.000	0.408
18	11.000	3.317
19	0.755	0.614
20	7.000	1.323
21	0.632	0.265
22	3.917	0.808
23	0.588	0.542
24	10.000	1.826
25	0.375	0.217
26	11.000	1.106
27	1.053	0.388
28	0.476	0.488
29	3.556	0.943
30	8.000	1.414
31	1.429	0.535
32	6.000	1.225
33	0.545	0.739
34	11.000	2.345

D23 файл о23d2A