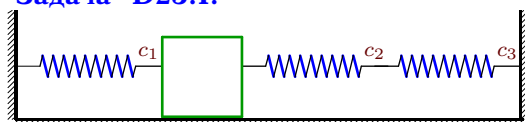


Свободное колебание точки

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.

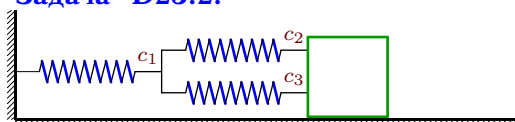
4



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

Задача D23.2.

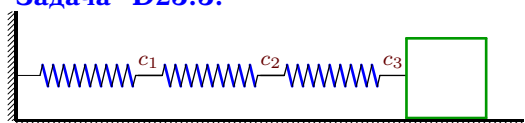
4



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

Задача D23.3.

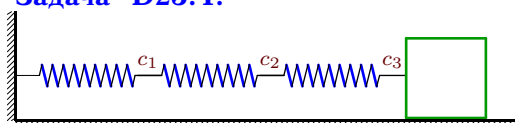
4



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

Задача D23.4.

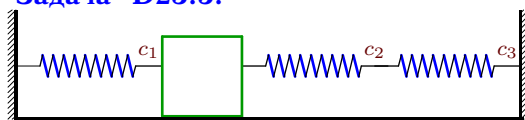
4



$$c_1 = 2 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 7 \text{ кг}.$$

Задача D23.5.

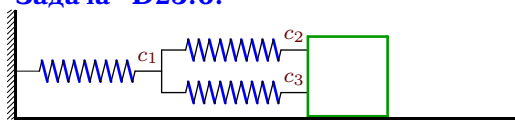
4



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

Задача D23.6.

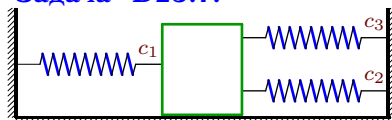
4



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

Задача D23.7.

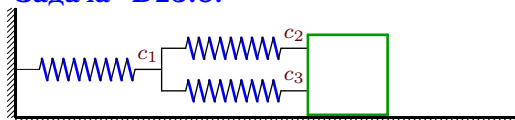
4



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

Задача D23.8.

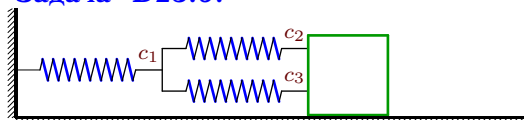
4



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

Задача D23.9.

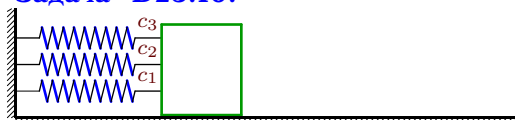
4



$$c_1 = 5 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.10.

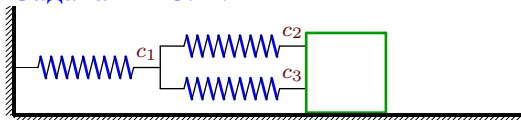
4



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

Задача D23.11.

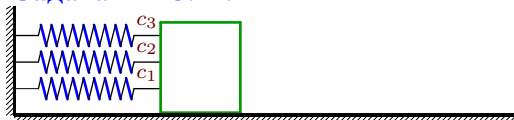
4



$$c_1 = 5 \text{ Н/м}, c_2 = 2 \text{ Н/м}, \\ c_3 = 1 \text{ Н/м}, m = 7 \text{ кг}.$$

Задача D23.12.

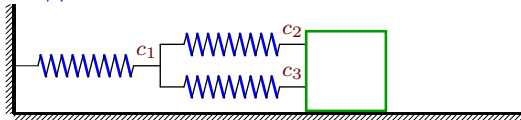
4



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

Задача D23.13.

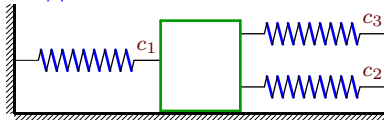
4



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

Задача D23.14.

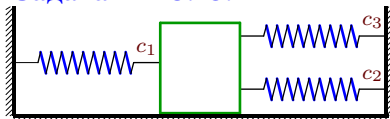
4



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

Задача D23.15.

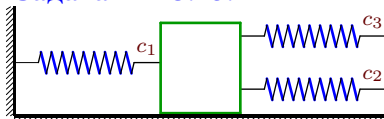
4



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

Задача D23.16.

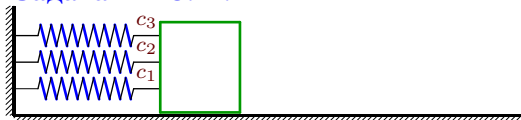
4



$$c_1 = 4 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 8 \text{ кг}.$$

Задача D23.17.

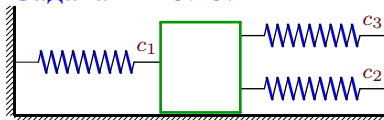
4



$$c_1 = 2 \text{ Н/м}, c_2 = 7 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 8 \text{ кг}.$$

Задача D23.18.

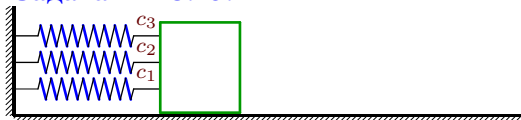
4



$$c_1 = 4 \text{ Н/м}, c_2 = 3 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.19.

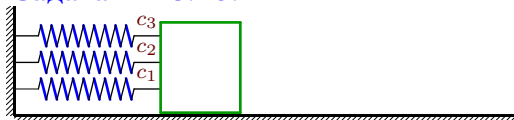
4



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

Задача D23.20.

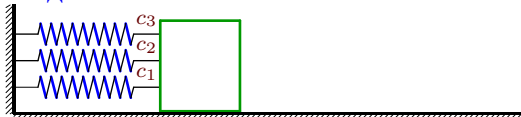
4



$$c_1 = 1 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 8 \text{ кг}.$$

Задача D23.21.

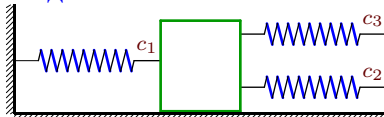
4



$$c_1 = 1 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.22.

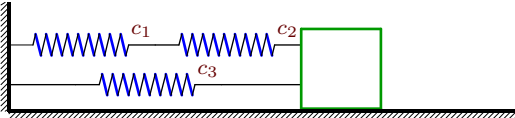
4



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

Задача D23.23.

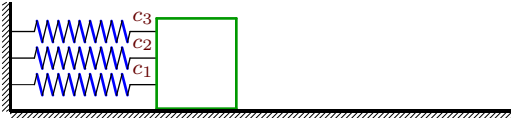
4



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

Задача D23.24.

4



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

Задача D23.25.

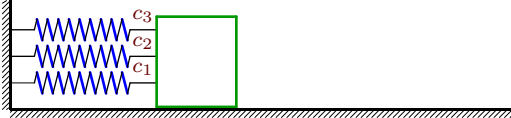
4



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

Задача D23.26.

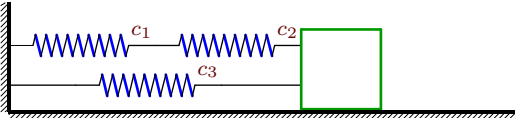
4



$$c_1 = 1 \text{ Н/м}, c_2 = 3 \text{ Н/м}, \\ c_3 = 6 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.27.

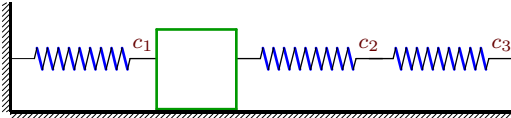
4



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

Задача D23.28.

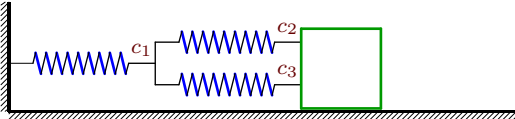
4



$$c_1 = 4 \text{ Н/м}, c_2 = 5 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 6 \text{ кг}.$$

Задача D23.29.

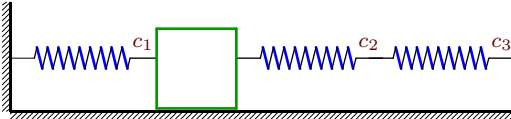
4



$$c_1 = 8 \text{ Н/м}, c_2 = 1 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.30.

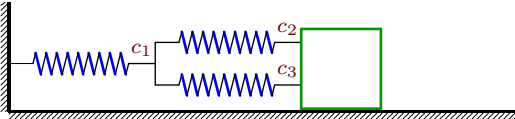
4



$$c_1 = 3 \text{ Н/м}, c_2 = 7 \text{ Н/м}, \\ c_3 = 3 \text{ Н/м}, m = 2 \text{ кг}.$$

Задача D23.31.

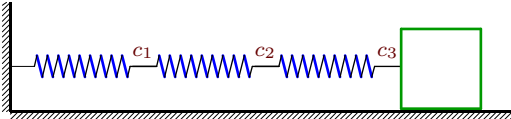
4



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

Задача D23.32.

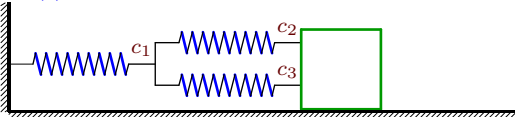
4



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

Задача D23.33.

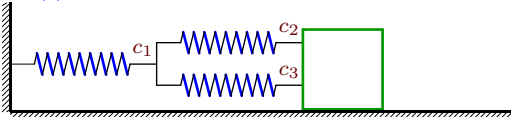
4



$$c_1 = 1 \text{ Н/м}, c_2 = 4 \text{ Н/м}, \\ c_3 = 5 \text{ Н/м}, m = 9 \text{ кг}.$$

Задача D23.34.

4



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

D23 Ответы.**Свободное колебание точки**

23.03.2012

№	c_0 , Н/м	k , с^{-1}
1	7.917	1.407
2	0.268	0.366
3	0.667	0.816
4	0.968	0.372
5	6.200	1.245
6	0.458	0.339
7	7.000	2.646
8	0.444	0.667
9	0.343	0.414
10	8.000	1.155
11	0.533	0.276
12	8.000	2.000
13	0.533	0.298
14	6.000	2.449
15	9.000	3.000
16	15.000	1.369
17	14.000	1.323
18	12.000	1.155
19	11.000	1.915
20	12.000	1.225
21	9.000	1.000
22	7.000	1.323
23	7.077	1.330
24	10.000	1.581
25	9.000	1.061
26	10.000	1.054
27	3.875	0.656
28	5.875	0.990
29	0.375	0.433
30	5.100	1.597
31	0.393	0.627
32	0.500	0.500
33	1.111	0.351
34	0.361	0.212

D23 файл o23d4A