

# Центр тяжести пространственной стержневой фигуры

Найти координаты центра тяжести пространственной фигуры, состоящей из четырех однородных стержней. Размеры даны в метрах.

*Кирсанов М.Н. Решебник. Теоретическая механика*/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.122.)

**Задача S-21.1.** 7

$l_1 = 10, l_2 = 10, l_3 = 10, l_4 = 20.$

**Задача S-21.2.** 7

$l_1 = 10, l_2 = 20, l_3 = 10, l_4 = 10.$

**Задача S-21.3.** 7

$l_1 = 9, l_2 = 12, l_3 = 15, l_4 = 18.$

**Задача S-21.4.** 7

$l_1 = 8, l_2 = 24, l_3 = 16, l_4 = 16.$

**Задача S-21.5.** 7

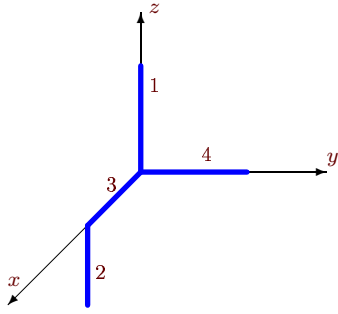
$l_1 = 12, l_2 = 24, l_3 = 14, l_4 = 22.$

**Задача S-21.6.** 7

$l_1 = 24, l_2 = 16, l_3 = 16, l_4 = 8.$

Задача S-21.7.

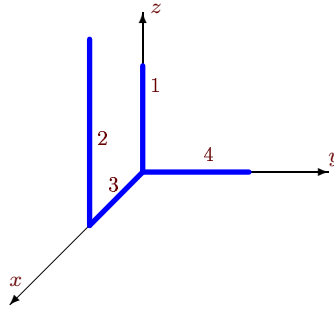
7



$$l_1 = 20, l_2 = 20, l_3 = 8, l_4 = 16.$$

Задача S-21.8.

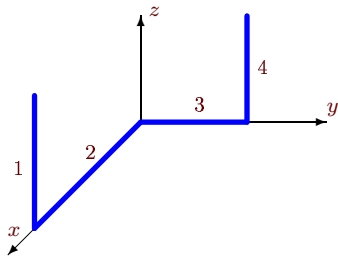
7



$$l_1 = 10, l_2 = 20, l_3 = 10, l_4 = 10.$$

Задача S-21.9.

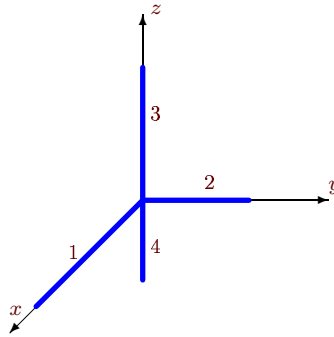
7



$$l_1 = 12, l_2 = 12, l_3 = 24, l_4 = 24.$$

Задача S-21.10.

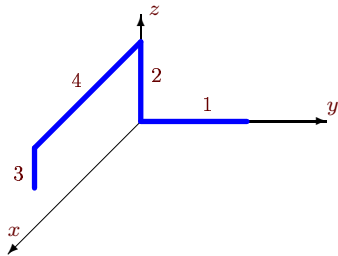
7



$$l_1 = 12, l_2 = 24, l_3 = 8, l_4 = 28.$$

Задача S-21.11.

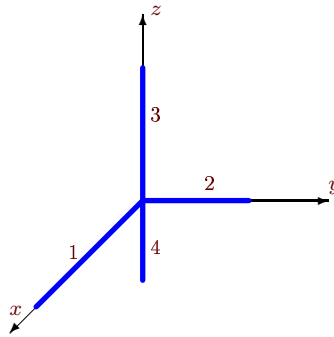
7



$$l_1 = 28, l_2 = 28, l_3 = 14, l_4 = 28.$$

Задача S-21.12.

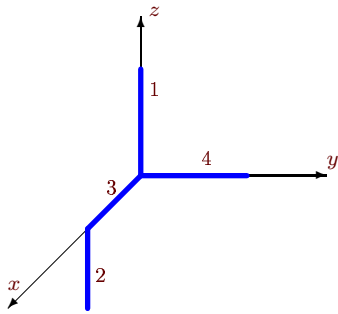
7



$$l_1 = 12, l_2 = 24, l_3 = 20, l_4 = 16.$$

Задача S-21.13.

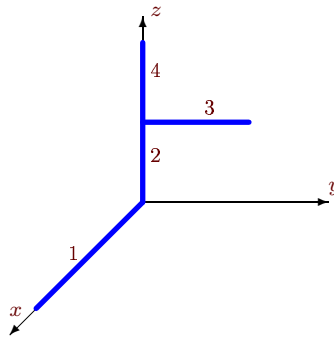
7



$$l_1 = 20, l_2 = 20, l_3 = 8, l_4 = 16.$$

Задача S-21.14.

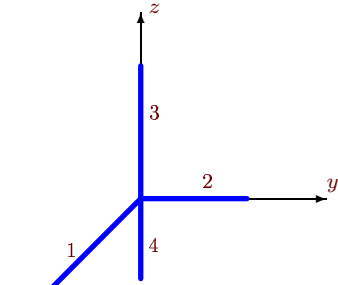
7



$$l_1 = 12, l_2 = 9, l_3 = 12, l_4 = 3.$$

Задача S-21.15.

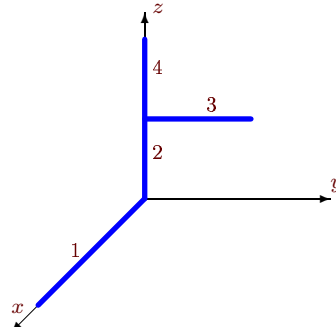
7



$$l_1 = 12, l_2 = 24, l_3 = 10, l_4 = 26.$$

Задача S-21.16.

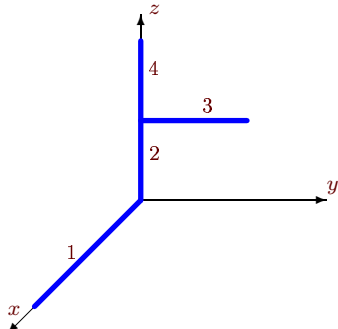
7



$$l_1 = 20, l_2 = 10, l_3 = 10, l_4 = 10.$$

Задача S-21.17.

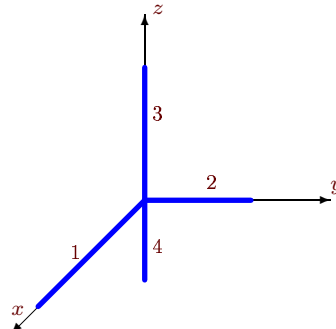
7



$$l_1 = 12, l_2 = 3, l_3 = 12, l_4 = 9.$$

Задача S-21.18.

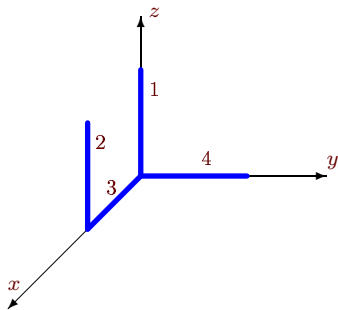
7



$$l_1 = 10, l_2 = 20, l_3 = 15, l_4 = 5.$$

Задача S-21.19.

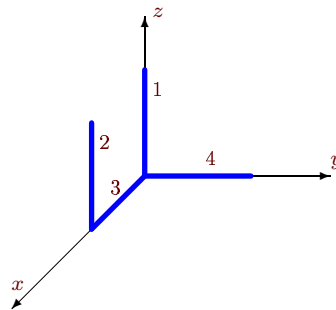
7



$$l_1 = 6, l_2 = 6, l_3 = 12, l_4 = 12.$$

Задача S-21.20.

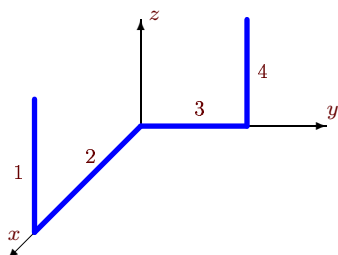
7



$$l_1 = 12, l_2 = 12, l_3 = 24, l_4 = 24.$$

Задача S-21.21.

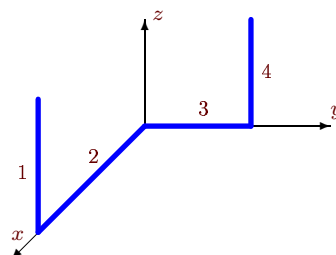
7



$$l_1 = 24, l_2 = 16, l_3 = 16, l_4 = 8.$$

Задача S-21.22.

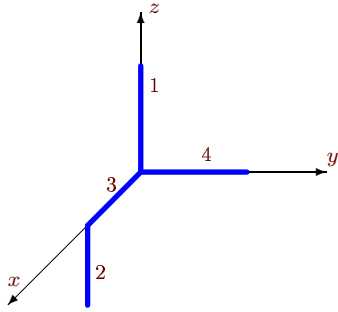
7



$$l_1 = 12, l_2 = 12, l_3 = 24, l_4 = 24.$$

Задача S-21.23.

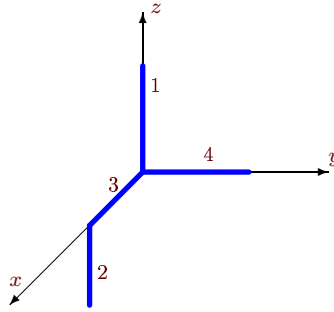
7



$$l_1 = 20, l_2 = 20, l_3 = 8, l_4 = 16.$$

Задача S-21.24.

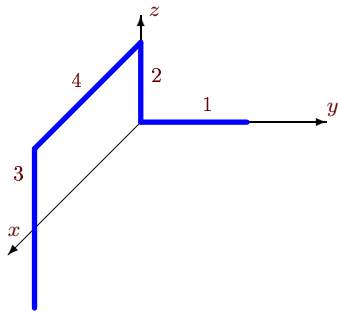
7



$$l_1 = 3, l_2 = 15, l_3 = 6, l_4 = 12.$$

Задача S-21.25.

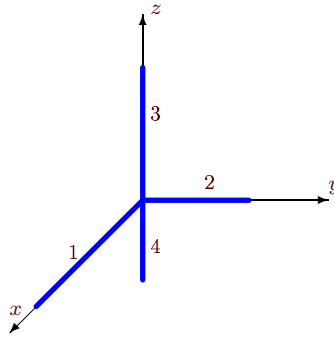
7



$$l_1 = 10, l_2 = 10, l_3 = 20, l_4 = 10.$$

Задача S-21.26.

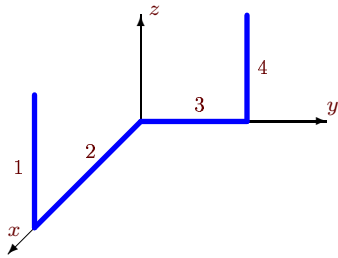
7



$$l_1 = 12, l_2 = 24, l_3 = 10, l_4 = 26.$$

Задача S-21.27.

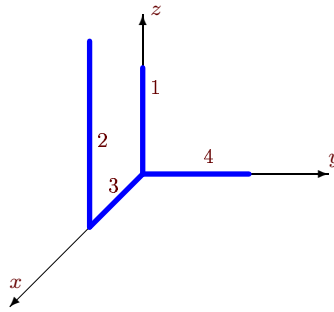
7



$$l_1 = 12, l_2 = 12, l_3 = 24, l_4 = 24.$$

Задача S-21.28.

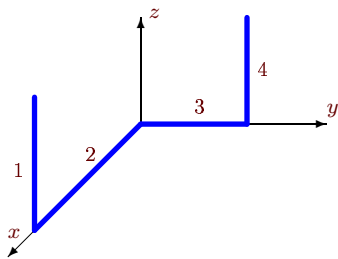
7



$$l_1 = 8, l_2 = 24, l_3 = 16, l_4 = 16.$$

Задача S-21.29.

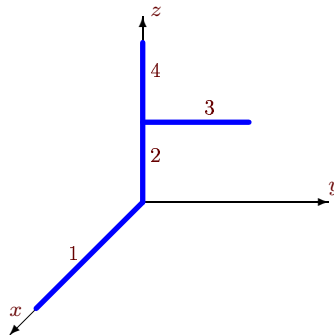
7



$$l_1 = 8, l_2 = 16, l_3 = 16, l_4 = 24.$$

Задача S-21.30.

7



$$l_1 = 6, l_2 = 3, l_3 = 6, l_4 = 3.$$

## Ответы.

### Центр тяжести пространственной стержневой фигуры

17.02.2015

	$x_c$	$y_c$	$z_c$	$L$
1	3	4	2	50
2	3	1	11	50
3	2	3	3	54
4	8	2	5	64
5	1	4	-2	72
6	8	4	5	64
7	3	2	0	64
8	5	1	5	50
9	3	12	5	72
10	1	4	-5	72
11	8	4	15	98
12	1	4	1	72
13	3	2	0	64
14	2	2	5	36
15	1	4	-4	72
16	4	1	6	50
17	2	2	3	36
18	1	4	2	50
19	4	2	1	36
20	8	4	2	72
21	8	4	5	64
22	3	12	5	72
23	3	2	0	64
24	3	2	-3	36
25	5	1	3	50
26	1	4	-4	72
27	3	12	5	72
28	8	2	5	64
29	4	8	5	64
30	1	1	2	18

S-21 файл o21s7A