

# Центр тяжести пространственной стержневой фигуры

Найти координаты центра тяжести пространственной фигуры, состоящей из шести 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 21.1.** 9

$a = 2,$   
 $b = 3,$   
 $c = 4,$   
 $d = 2.$

**Задача 21.2.** 9

$a = 3,$   
 $b = 4,$   
 $c = 3,$   
 $d = 1.$

**Задача 21.3.** 9

$a = 6,$   
 $b = 5,$   
 $c = 4,$   
 $d = 3.$

**Задача 21.4.** 9

$a = 2,$   
 $b = 3,$   
 $c = 4,$   
 $d = 2.$

**Задача 21.5.** 9

$a = 3,$   
 $b = 4,$   
 $c = 3,$   
 $d = 2.$

**Задача 21.6.** 9

$a = 7,$   
 $b = 6,$   
 $c = 5,$   
 $d = 3.$

**Задача 21.7.** 9

$a = 6,$   
 $b = 5,$   
 $c = 4,$   
 $d = 2.$

**Задача 21.8.** 9

$a = 6,$   
 $b = 5,$   
 $c = 4,$   
 $d = 3.$

**Задача 21.9.** 9

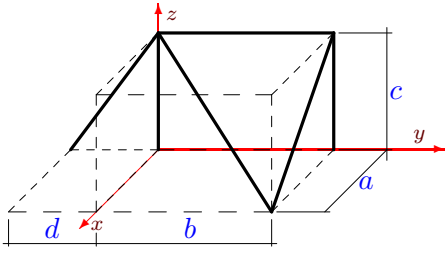
$a = 4,$   
 $b = 6,$   
 $c = 5,$   
 $d = 4.$

**Задача 21.10.** 9

$a = 6,$   
 $b = 5,$   
 $c = 4,$   
 $d = 3.$

Задача 21.11.

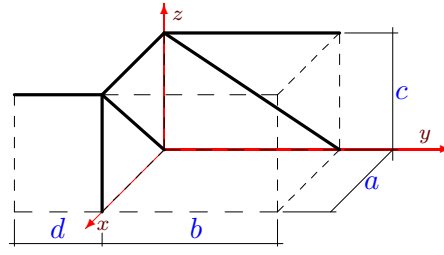
9



$$\begin{aligned} a &= 3, \\ b &= 4, \\ c &= 3, \\ d &= 1. \end{aligned}$$

Задача 21.12.

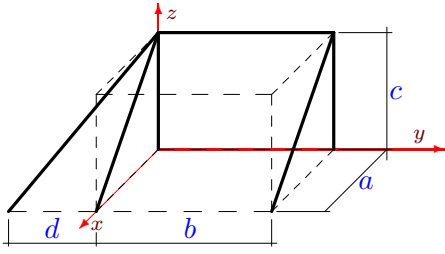
9



$$\begin{aligned} a &= 3, \\ b &= 4, \\ c &= 3, \\ d &= 2. \end{aligned}$$

Задача 21.13.

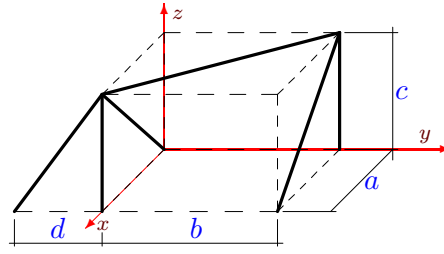
9



$$\begin{aligned} a &= 2, \\ b &= 3, \\ c &= 4, \\ d &= 2. \end{aligned}$$

Задача 21.14.

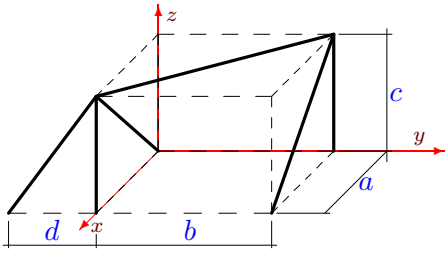
9



$$\begin{aligned} a &= 4, \\ b &= 6, \\ c &= 5, \\ d &= 4. \end{aligned}$$

Задача 21.15.

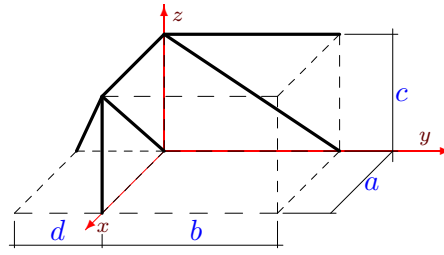
9



$$\begin{aligned} a &= 4, \\ b &= 6, \\ c &= 5, \\ d &= 4. \end{aligned}$$

Задача 21.16.

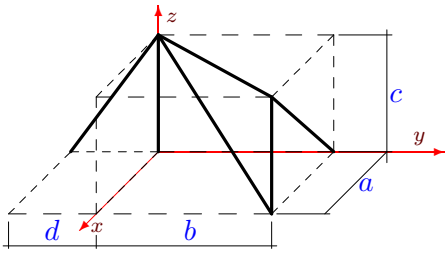
9



$$\begin{aligned} a &= 2, \\ b &= 3, \\ c &= 4, \\ d &= 3. \end{aligned}$$

Задача 21.17.

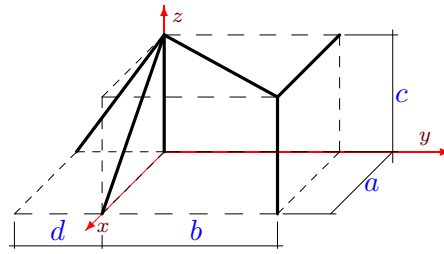
9



$$\begin{aligned} a &= 3, \\ b &= 4, \\ c &= 3, \\ d &= 1. \end{aligned}$$

Задача 21.18.

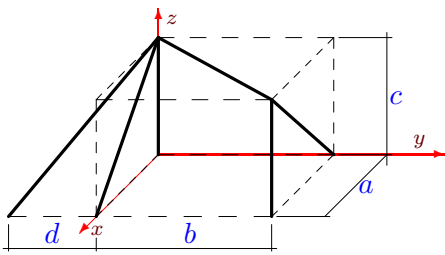
9



$$\begin{aligned} a &= 5, \\ b &= 4, \\ c &= 3, \\ d &= 1. \end{aligned}$$

Задача 21.19.

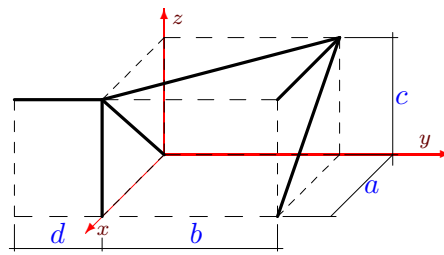
9



$$\begin{aligned} a &= 2, \\ b &= 3, \\ c &= 4, \\ d &= 2. \end{aligned}$$

Задача 21.20.

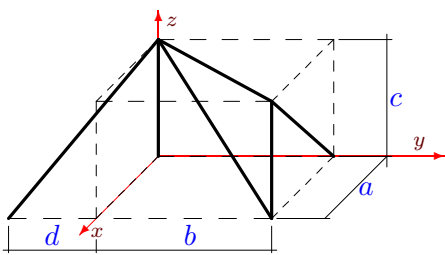
9



$$\begin{aligned} a &= 6, \\ b &= 5, \\ c &= 4, \\ d &= 3. \end{aligned}$$

Задача 21.21.

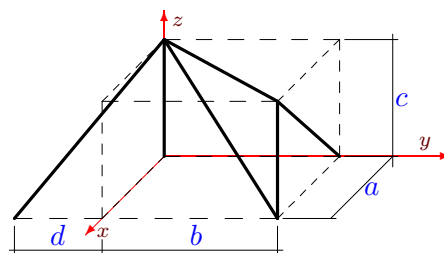
9



$$\begin{aligned} a &= 7, \\ b &= 6, \\ c &= 5, \\ d &= 3. \end{aligned}$$

Задача 21.22.

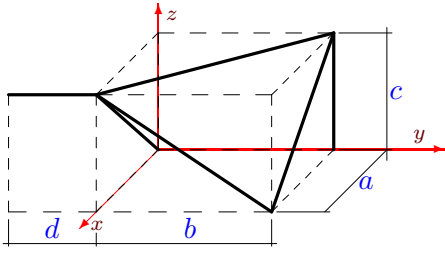
9



$$\begin{aligned} a &= 7, \\ b &= 6, \\ c &= 5, \\ d &= 3. \end{aligned}$$

Задача 21.23.

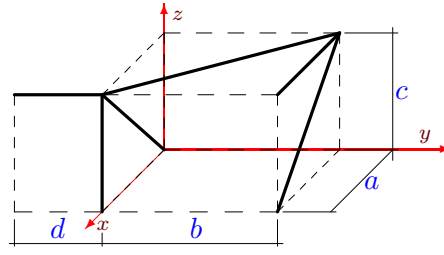
9



$$\begin{aligned}
 a &= 3, \\
 b &= 4, \\
 c &= 3, \\
 d &= 2.
 \end{aligned}$$

Задача 21.24.

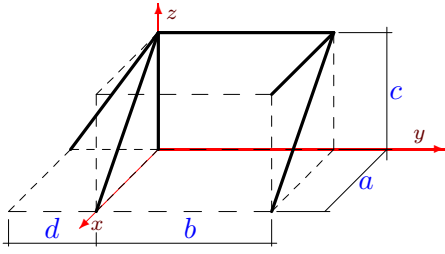
9



$$\begin{aligned}
 a &= 6, \\
 b &= 5, \\
 c &= 4, \\
 d &= 3.
 \end{aligned}$$

Задача 21.25.

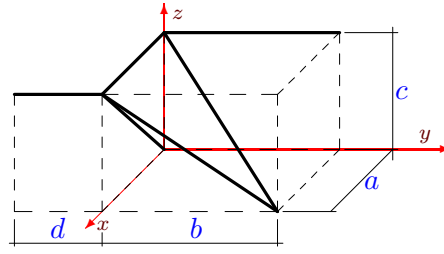
9



$$\begin{aligned}
 a &= 7, \\
 b &= 6, \\
 c &= 5, \\
 d &= 3.
 \end{aligned}$$

Задача 21.26.

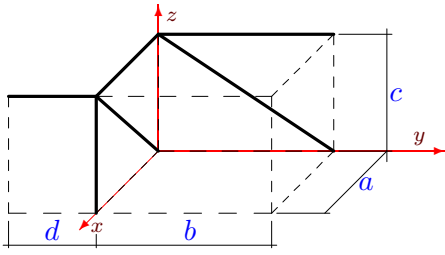
9



$$\begin{aligned}
 a &= 3, \\
 b &= 4, \\
 c &= 3, \\
 d &= 2.
 \end{aligned}$$

Задача 21.27.

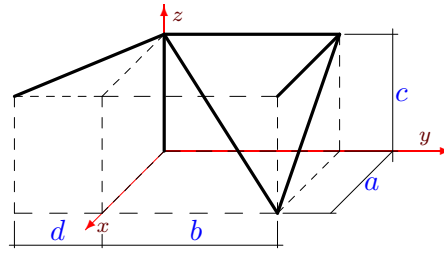
9



$$\begin{aligned}
 a &= 2, \\
 b &= 3, \\
 c &= 4, \\
 d &= 3.
 \end{aligned}$$

Задача 21.28.

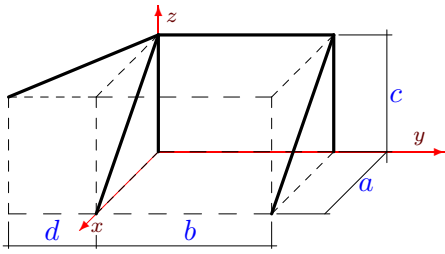
9



$$\begin{aligned}
 a &= 5, \\
 b &= 4, \\
 c &= 3, \\
 d &= 1.
 \end{aligned}$$

Задача 21.29.

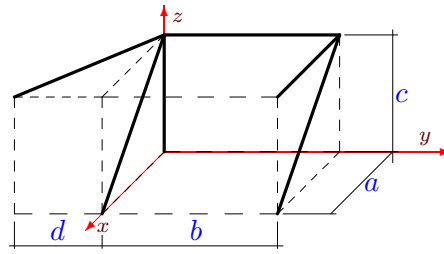
9



$$\begin{aligned}
 a &= 2, \\
 b &= 3, \\
 c &= 4, \\
 d &= 2.
 \end{aligned}$$

Задача 21.30.

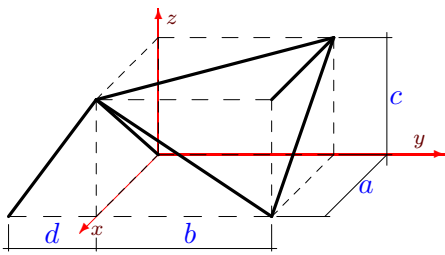
9



$$\begin{aligned}
 a &= 2, \\
 b &= 3, \\
 c &= 4, \\
 d &= 2.
 \end{aligned}$$

Задача 21.31.

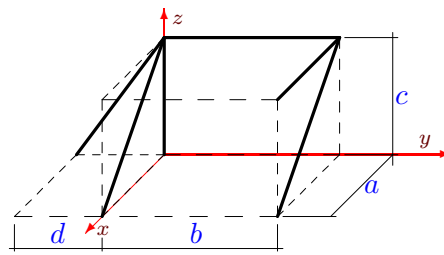
9



$$\begin{aligned}
 a &= 2, \\
 b &= 3, \\
 c &= 4, \\
 d &= 3.
 \end{aligned}$$

Задача 21.32.

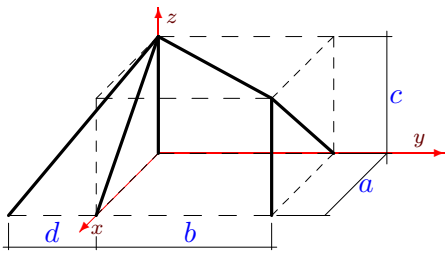
9



$$\begin{aligned}
 a &= 6, \\
 b &= 5, \\
 c &= 4, \\
 d &= 2.
 \end{aligned}$$

Задача 21.33.

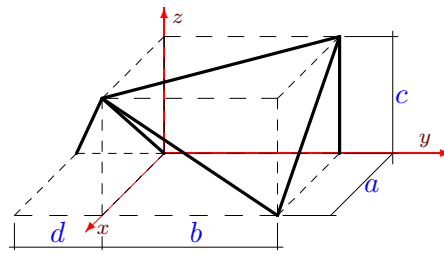
9



$$\begin{aligned}
 a &= 2, \\
 b &= 3, \\
 c &= 4, \\
 d &= 2.
 \end{aligned}$$

Задача 21.34.

9



$$\begin{aligned}
 a &= 7, \\
 b &= 6, \\
 c &= 5, \\
 d &= 4.
 \end{aligned}$$

**Центр тяжести пространственной стержневой фигуры**

	$L$	$x_c$	$y_c$	$z_c$
1	22.550	0.802	0.840	2.497
2	21.648	0.807	1.635	1.996
3	35.232	3.596	2.301	2.954
4	25.449	1.000	1.019	2.283
5	23.485	1.755	2.000	1.947
6	45.926	3.500	2.816	3.416
7	36.557	3.000	1.894	2.773
8	37.636	3.590	2.234	2.415
9	39.391	2.417	1.395	3.135
10	35.232	3.596	2.301	2.954
11	23.236	0.650	2.025	1.758
12	21.243	1.218	0.753	2.136
13	24.843	0.557	1.007	2.242
14	36.420	2.352	2.121	2.995
15	36.420	2.352	2.121	2.995
16	23.857	0.832	0.164	2.419
17	24.236	1.304	2.024	1.809
18	26.396	2.201	1.638	2.148
19	25.449	1.000	1.019	2.283
20	35.232	3.596	2.301	2.954
21	47.420	3.500	2.680	2.986
22	47.420	3.500	2.680	2.986
23	23.485	1.755	2.000	1.947
24	35.232	3.596	2.301	2.954
25	41.036	2.064	2.507	3.292
26	24.074	1.687	1.149	2.061
27	21.472	0.953	0.349	2.745
28	30.001	1.917	2.097	2.205
29	22.773	0.517	1.189	2.512
30	20.773	0.663	1.015	2.754
31	24.550	1.407	1.011	2.457
32	33.894	1.808	2.186	2.649
33	25.449	1.000	1.019	2.283
34	48.721	3.702	2.334	2.973