

# 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.** 6

$a = 5,$   
 $b = 4,$   
 $c = 3,$   
 $d = 1.$

**Задача 21.2.** 6

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

**Задача 21.3.** 6

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

**Задача 21.4.** 6

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

**Задача 21.5.** 6

$a = 5,$   
 $b = 4,$   
 $c = 3,$   
 $d = 1.$

**Задача 21.6.** 6

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

**Задача 21.7.** 6

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

**Задача 21.8.** 6

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

**Задача 21.9.** 6

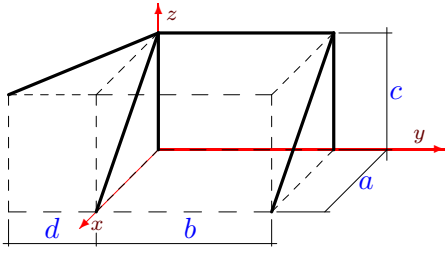
$a = 2,$   
 $b = 3,$   
 $c = 4,$   
 $d = 2.$

**Задача 21.10.** 6

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

Задача 21.11.

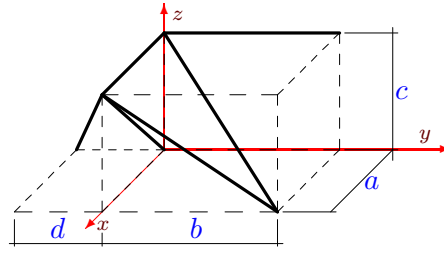
6



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

Задача 21.12.

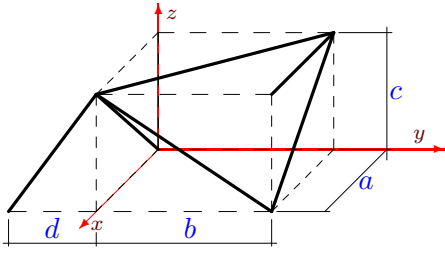
6



$$\begin{aligned} a &= 5, \\ b &= 4, \\ c &= 3, \\ d &= 2. \end{aligned}$$

Задача 21.13.

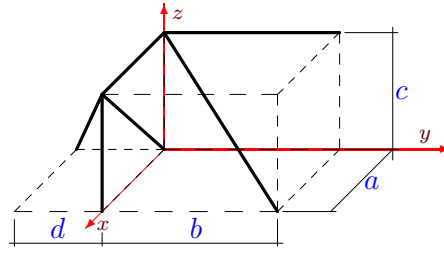
6



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

Задача 21.14.

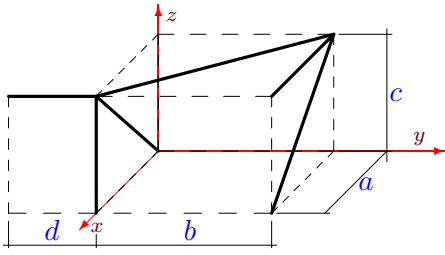
6



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

Задача 21.15.

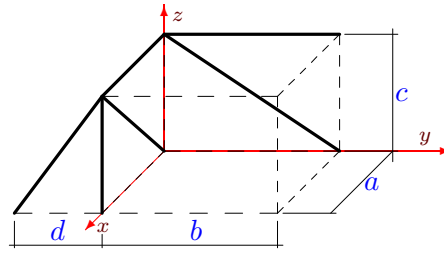
6



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

Задача 21.16.

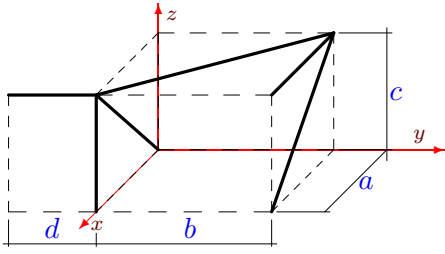
6



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

Задача 21.17.

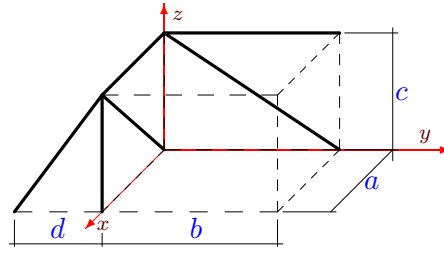
6



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

Задача 21.18.

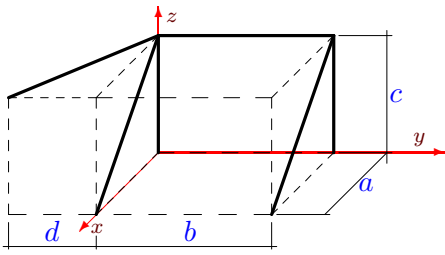
6



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

Задача 21.19.

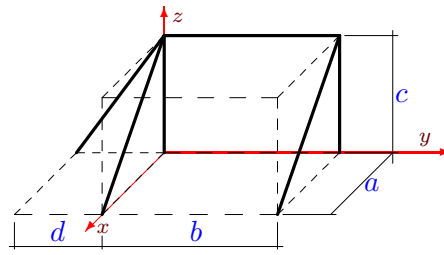
6



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

Задача 21.20.

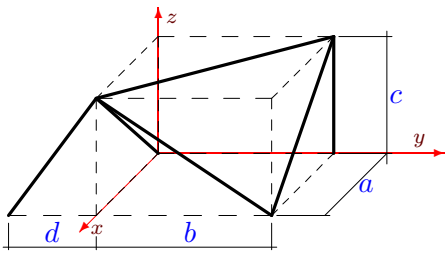
6



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

Задача 21.21.

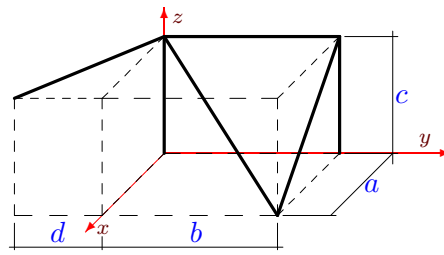
6



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

Задача 21.22.

6



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



**Центр тяжести пространственной стержневой фигуры**

	$L$	$x_c$	$y_c$	$z_c$
1	30.818	1.932	2.028	1.938
2	24.190	1.500	1.798	1.996
3	25.242	1.079	0.475	2.396
4	35.616	1.865	0.804	3.202
5	31.221	2.500	1.900	1.808
6	40.921	1.633	2.989	2.867
7	24.416	0.366	1.042	2.246
8	23.236	1.048	2.025	2.156
9	25.329	0.389	1.323	2.237
10	36.763	1.521	0.716	3.180
11	26.761	1.566	1.524	2.010
12	33.066	2.576	0.786	1.908
13	25.091	2.014	1.808	1.978
14	24.242	1.041	0.186	2.412
15	42.424	4.243	2.670	3.692
16	23.472	1.043	0.192	2.426
17	21.485	1.849	1.721	2.198
18	40.816	3.294	0.701	3.296
19	40.820	2.128	2.160	3.334
20	39.036	1.543	2.328	2.884
21	26.550	1.226	1.161	2.272
22	36.178	1.115	2.909	3.260
23	37.636	3.590	2.234	2.415
24	21.243	1.218	0.753	2.136
25	24.291	1.000	1.485	2.530
26	21.819	1.000	1.313	2.773
27	42.820	2.601	2.340	3.704
28	37.088	2.000	2.142	2.986
29	36.420	2.352	2.121	2.995
30	22.857	1.219	0.682	2.700
31	37.636	3.750	2.580	2.893
32	24.432	1.070	1.901	1.930
33	31.671	3.179	1.974	2.040
34	26.902	2.593	0.749	2.113