

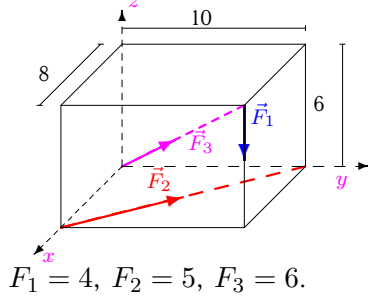
## Приведение системы сил

Систему трех сил, приложенных к вершинам параллелепипеда, привести к началу координат. Найти координаты точки пересечения центральной винтовой оси с плоскостью  $xy$ . Размеры на рисунках даны в м, силы — в Н.

Кирсанов М.Н. **Решбник. Теоретическая механика**/Под ред. А. И. Кириллова.— М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.111.)

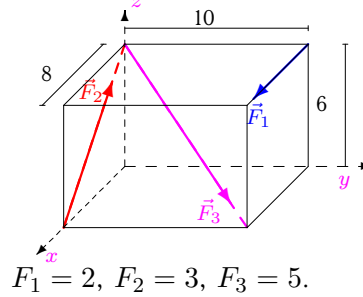
**Задача 12.1.**

6



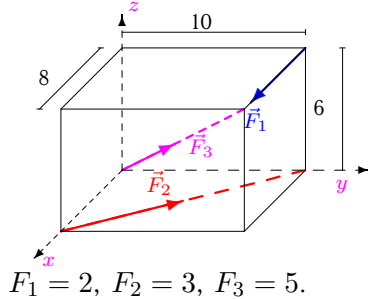
**Задача 12.2.**

6



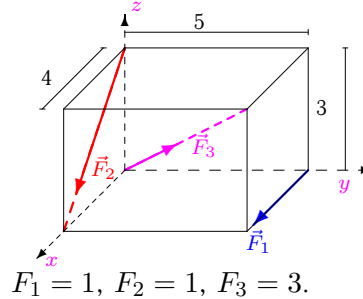
**Задача 12.3.**

6



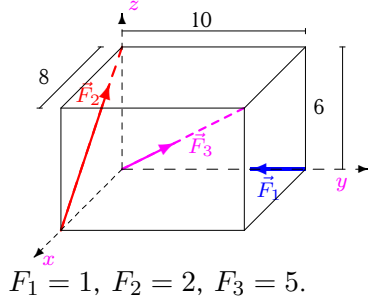
**Задача 12.4.**

6



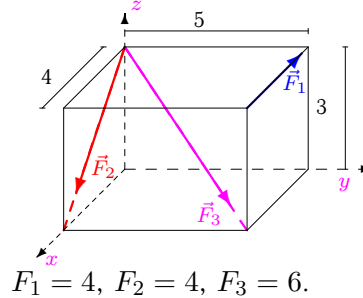
**Задача 12.5.**

6



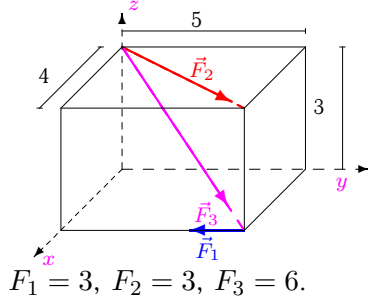
**Задача 12.6.**

6



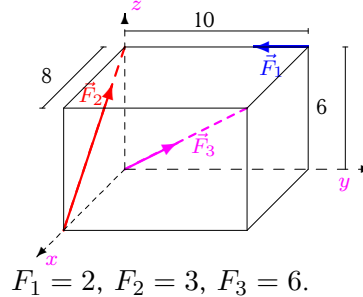
**Задача 12.7.**

6



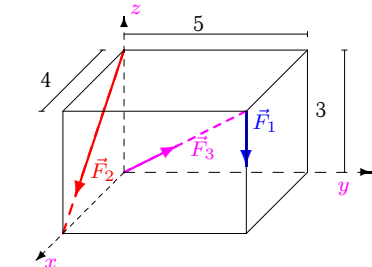
**Задача 12.8.**

6



**Задача 12.9.**

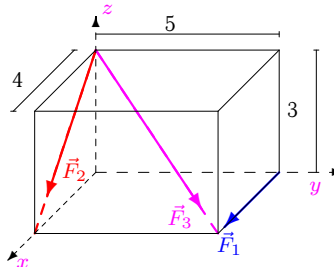
6



$F_1 = 4, F_2 = 4, F_3 = 5.$

**Задача 12.10.**

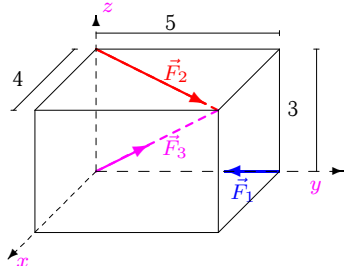
6



$F_1 = 1, F_2 = 1, F_3 = 3.$

**Задача 12.11.**

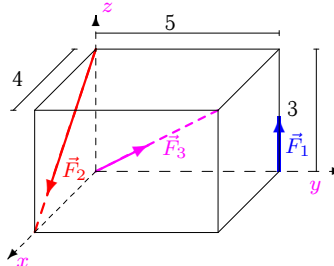
6



$F_1 = 1, F_2 = 1, F_3 = 4.$

**Задача 12.12.**

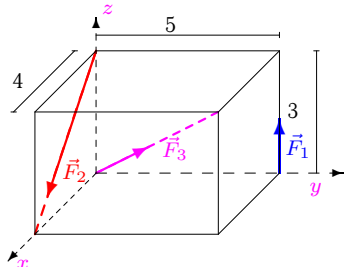
6



$F_1 = 1, F_2 = 1, F_3 = 2.$

**Задача 12.13.**

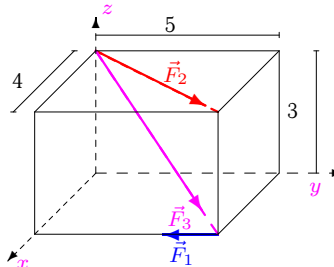
6



$F_1 = 1, F_2 = 1, F_3 = 2.$

**Задача 12.14.**

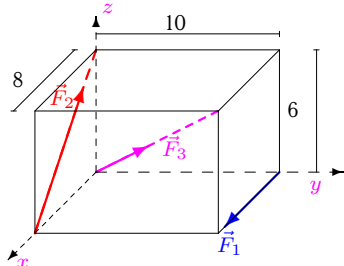
6



$F_1 = 3, F_2 = 3, F_3 = 6.$

**Задача 12.15.**

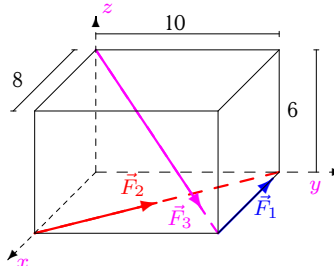
6



$F_1 = 1, F_2 = 2, F_3 = 4.$

**Задача 12.16.**

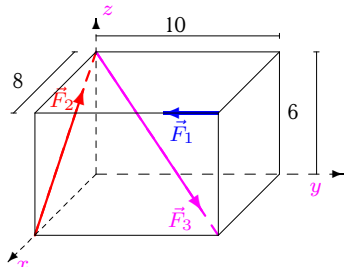
6



$F_1 = 3, F_2 = 4, F_3 = 6.$

**Задача 12.17.**

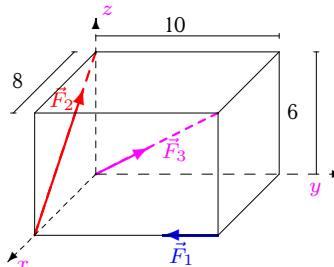
6



$F_1 = 4, F_2 = 5, F_3 = 8.$

**Задача 12.18.**

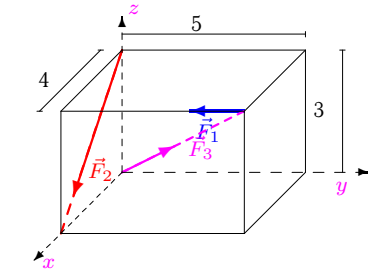
6



$F_1 = 3, F_2 = 4, F_3 = 7.$

**Задача 12.19.**

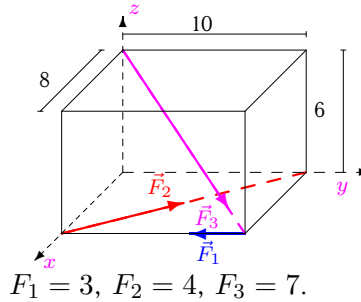
6



$F_1 = 4, F_2 = 4, F_3 = 7.$

**Задача 12.20.**

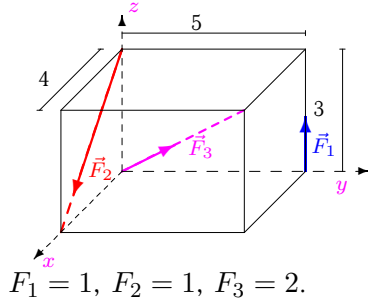
6



$F_1 = 3, F_2 = 4, F_3 = 7.$

**Задача 12.21.**

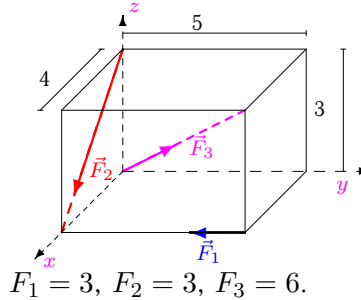
6



$F_1 = 1, F_2 = 1, F_3 = 2.$

**Задача 12.22.**

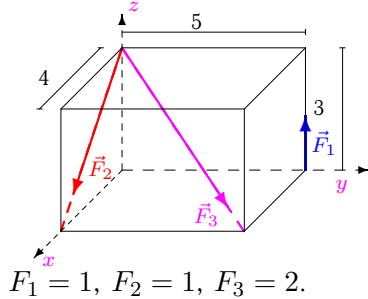
6



$F_1 = 3, F_2 = 3, F_3 = 6.$

**Задача 12.23.**

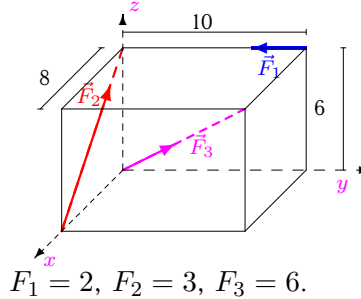
6



$F_1 = 1, F_2 = 1, F_3 = 2.$

**Задача 12.24.**

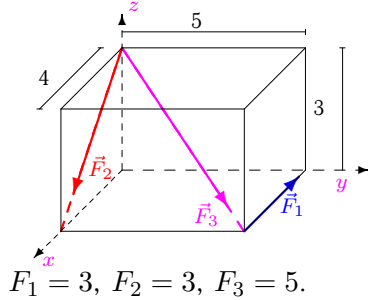
6



$F_1 = 2, F_2 = 3, F_3 = 6.$

**Задача 12.25.**

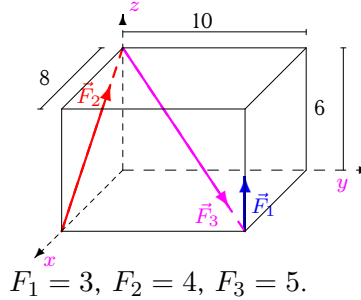
6



$F_1 = 3, F_2 = 3, F_3 = 5.$

**Задача 12.26.**

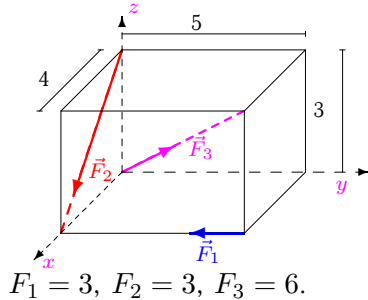
6



$F_1 = 3, F_2 = 4, F_3 = 5.$

**Задача 12.27.**

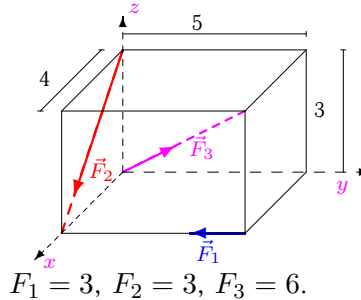
6



$F_1 = 3, F_2 = 3, F_3 = 6.$

**Задача 12.28.**

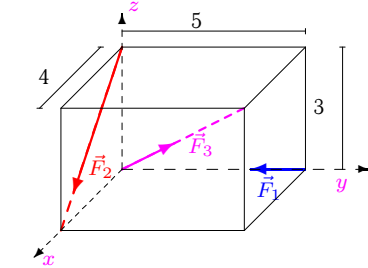
6



$F_1 = 3, F_2 = 3, F_3 = 6.$

**Задача 12.29.**

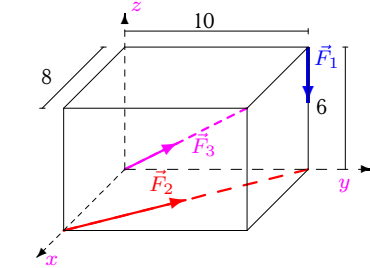
6



$F_1 = 1, F_2 = 1, F_3 = 4.$

**Задача 12.30.**

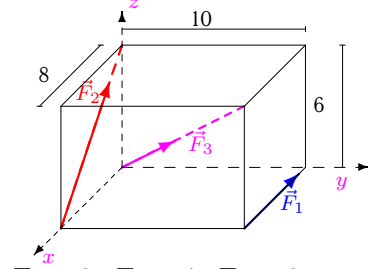
6



$F_1 = 2, F_2 = 3, F_3 = 4.$

**Задача 12.31.**

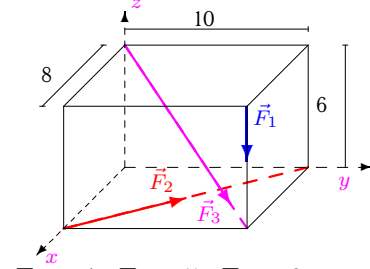
6



$F_1 = 3, F_2 = 4, F_3 = 6.$

**Задача 12.32.**

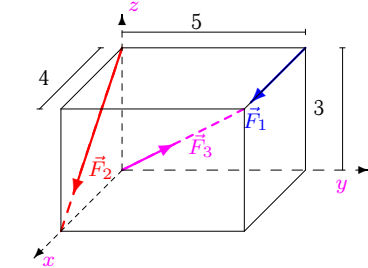
6



$F_1 = 4, F_2 = 5, F_3 = 6.$

**Задача 12.33.**

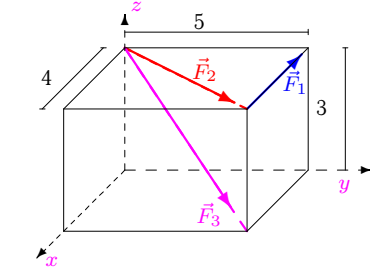
6



$F_1 = 2, F_2 = 2, F_3 = 4.$

**Задача 12.34.**

6



$F_1 = 4, F_2 = 4, F_3 = 6.$

**Приведение системы сил**

	$R_x$	$R_y$	$R_z$	$R$	$M_x$	$M_y$	$M_z$	$M$	$I$	$M_{min}$	$x_A$	$y_A$
1	0.271	8.147	-1.454	8.280	-40.000	32.000	31.235	59.997	204.450	24.691	5.298	28.057
2	2.428	3.536	-0.321	4.301	-21.213	14.571	-20.000	32.593	6.426	1.494	41.524	68.644
3	2.954	5.878	2.121	6.912	0.000	12.000	-1.259	12.066	67.867	9.818	-1.721	-1.978
4	3.497	2.121	0.673	4.145	0.000	2.400	-5.000	5.546	1.727	0.417	-3.250	-0.523
5	1.228	2.536	3.321	4.355	0.000	-9.600	0.000	9.600	-24.341	-5.589	1.911	0.475
6	2.594	4.243	-4.946	7.013	-12.728	7.782	20.000	24.951	-98.912	-14.103	3.299	1.519
7	5.268	3.585	-2.546	6.862	-19.756	15.805	-12.000	28.001	-16.867	-2.458	6.713	7.019
8	0.994	2.243	4.346	4.990	12.000	-14.400	0.000	18.745	-20.365	-4.081	2.892	2.949
9	6.028	3.536	-4.279	8.194	-20.000	25.600	0.000	32.486	-30.059	-3.668	6.353	4.044
10	3.497	2.121	-1.873	4.499	-6.364	7.491	-5.000	11.028	3.000	0.667	3.832	3.675
11	2.887	2.609	1.697	4.246	-2.343	1.874	0.000	3.000	-1.874	-0.441	-1.264	-1.204
12	1.931	1.414	1.249	2.700	5.000	2.400	0.000	5.546	13.051	4.834	0.106	1.235
13	1.931	1.414	1.249	2.700	5.000	2.400	0.000	5.546	13.051	4.834	0.106	1.235
14	5.268	3.585	-2.546	6.862	-19.756	15.805	-12.000	28.001	-16.867	-2.458	6.713	7.019
15	1.663	2.828	2.897	4.377	0.000	-9.600	-10.000	13.862	-56.123	-12.823	0.454	1.681
16	-2.105	7.366	-2.546	8.073	-25.456	20.365	54.988	63.925	63.609	7.879	5.176	9.193
17	0.525	1.657	-0.394	1.782	-9.941	3.153	-32.000	33.657	12.612	7.076	-8.690	30.518
18	0.760	1.950	5.370	5.763	0.000	-19.200	-24.000	30.735	-166.312	-28.858	1.757	0.708
19	7.160	0.950	0.570	7.245	12.000	9.600	-16.000	22.185	85.918	11.859	-14.118	0.492
20	1.461	5.073	-2.970	6.057	-29.698	23.759	0.988	38.045	74.210	12.251	4.545	10.995
21	1.931	1.414	1.249	2.700	5.000	2.400	0.000	5.546	13.051	4.834	0.106	1.235
22	5.794	1.243	0.746	5.973	0.000	7.200	-12.000	13.994	0.000	0.000	-9.657	-0.000
23	1.931	1.414	-0.449	2.435	0.757	5.794	0.000	5.843	9.657	3.965	7.785	5.322
24	0.994	2.243	4.346	4.990	12.000	-14.400	0.000	18.745	-20.365	-4.081	2.892	2.949
25	2.228	3.536	-3.921	5.731	-10.607	15.685	15.000	24.156	-27.000	-4.711	4.741	2.238
26	-0.372	3.536	3.279	4.836	8.787	-26.229	0.000	27.662	-96.000	-19.851	3.574	2.215
27	5.794	1.243	0.746	5.973	0.000	7.200	-12.000	13.994	0.000	0.000	-9.657	-0.000
28	5.794	1.243	0.746	5.973	0.000	7.200	-12.000	13.994	0.000	0.000	-9.657	-0.000
29	3.063	1.828	1.097	3.732	0.000	2.400	0.000	2.400	4.388	1.176	-1.663	-0.880
30	0.389	5.171	-0.303	5.194	-20.000	0.000	18.741	27.408	-13.451	-2.589	8.509	65.379
31	-2.806	4.243	4.946	7.094	0.000	-19.200	30.000	35.618	66.909	9.431	5.023	0.754
32	0.271	8.147	-6.546	10.454	-65.456	52.365	31.235	89.455	204.450	19.557	5.672	10.077
33	5.863	2.828	0.497	6.528	0.000	10.800	-10.000	14.719	25.576	3.918	-18.313	-7.078
34	1.893	7.366	-2.546	8.020	-22.098	5.679	20.000	30.341	-50.912	-6.348	4.521	8.092