

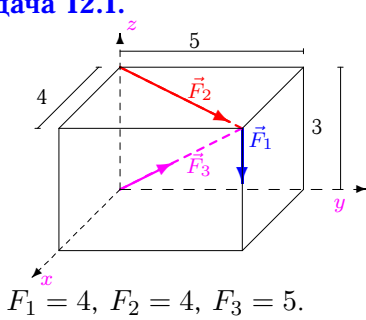
## Приведение системы сил

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.)

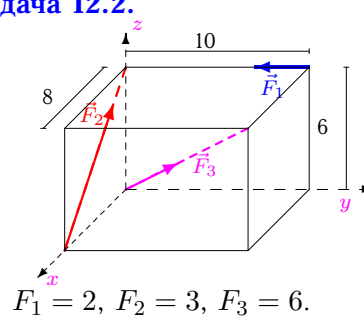
**Задача 12.1.**

7



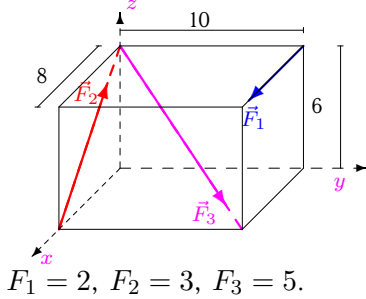
**Задача 12.2.**

7



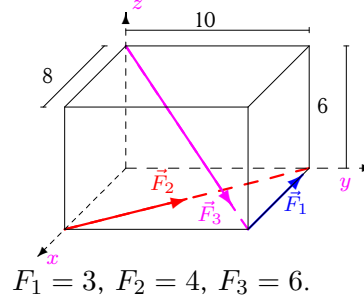
**Задача 12.3.**

7



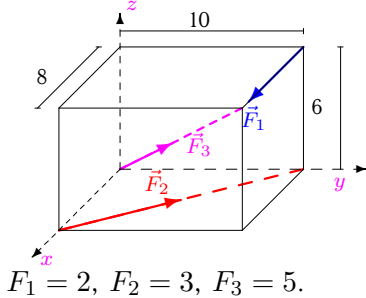
**Задача 12.4.**

7



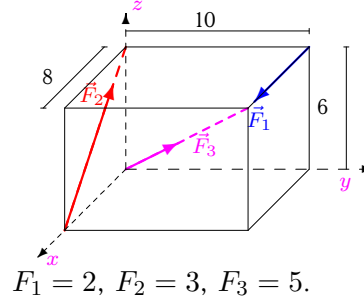
**Задача 12.5.**

7



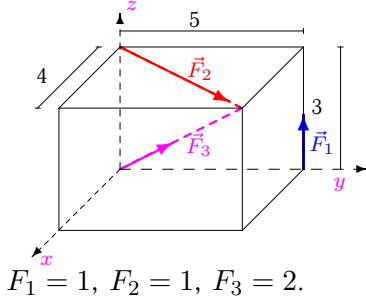
**Задача 12.6.**

7



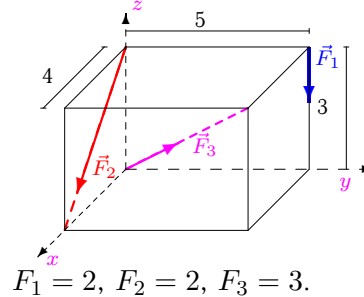
**Задача 12.7.**

7



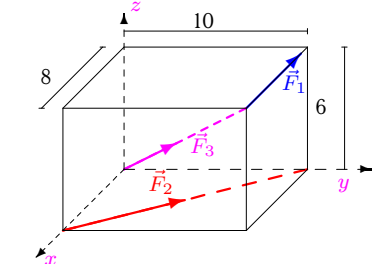
**Задача 12.8.**

7



**Задача 12.9.**

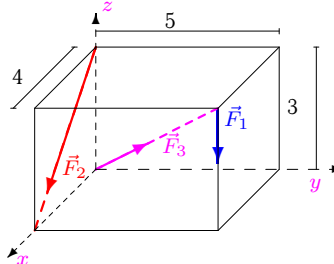
7



$F_1 = 4, F_2 = 5, F_3 = 7.$

**Задача 12.10.**

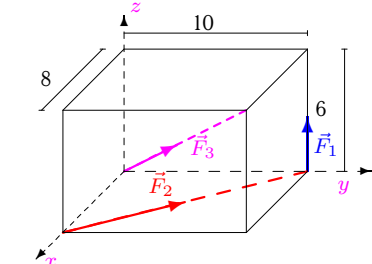
7



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

**Задача 12.11.**

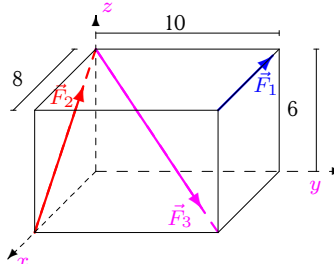
7



$F_1 = 1, F_2 = 2, F_3 = 3.$

**Задача 12.12.**

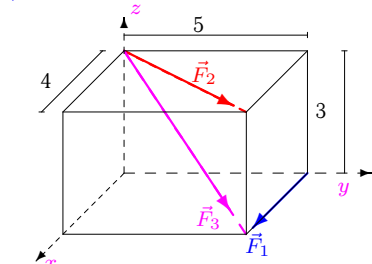
7



$F_1 = 4, F_2 = 5, F_3 = 7.$

**Задача 12.13.**

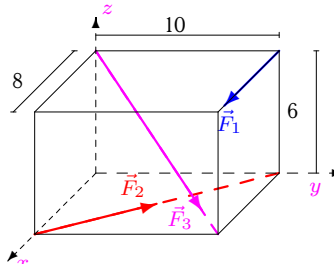
7



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

**Задача 12.14.**

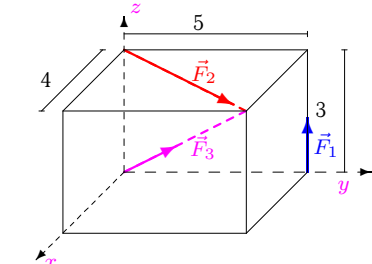
7



$F_1 = 2, F_2 = 3, F_3 = 5.$

**Задача 12.15.**

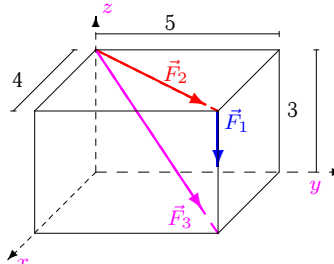
7



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

**Задача 12.16.**

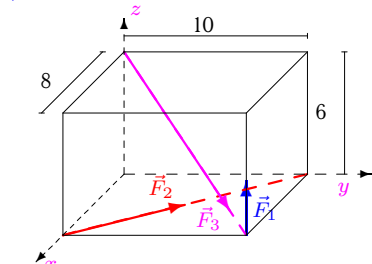
7



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

**Задача 12.17.**

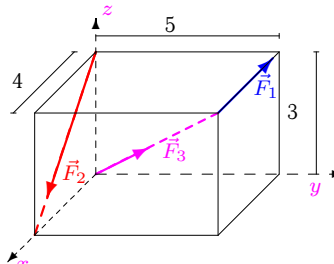
7



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

**Задача 12.18.**

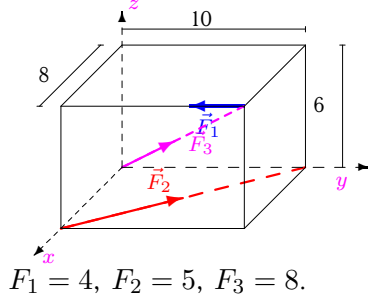
7



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

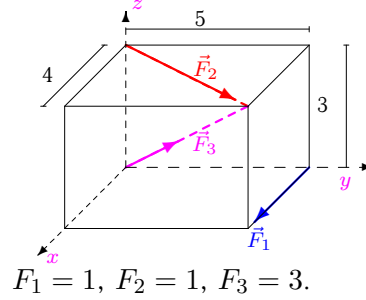
**Задача 12.19.**

7



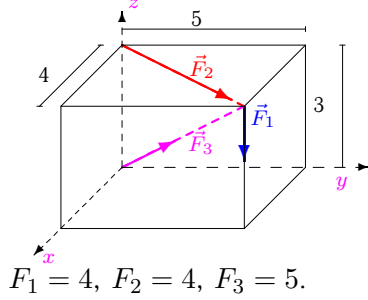
**Задача 12.20.**

7



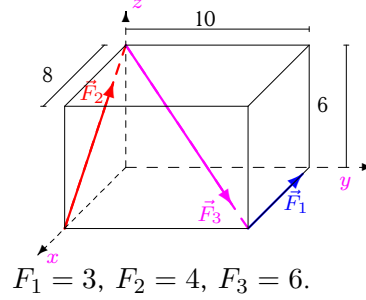
**Задача 12.21.**

7



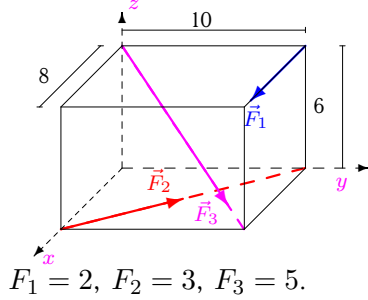
**Задача 12.22.**

7



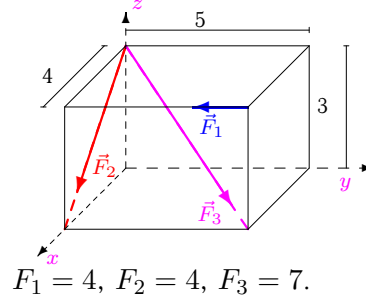
**Задача 12.23.**

7



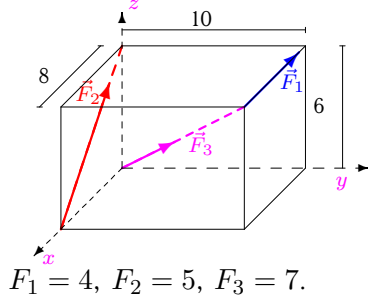
**Задача 12.24.**

7



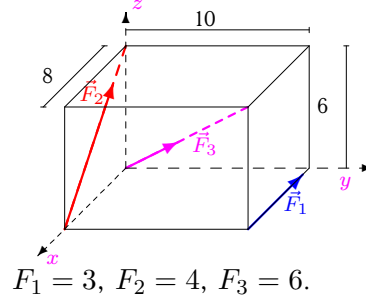
**Задача 12.25.**

7



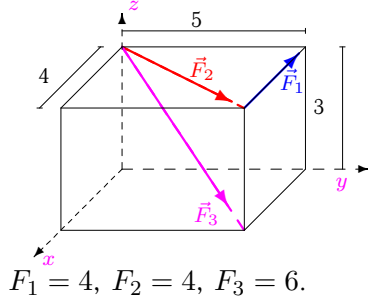
**Задача 12.26.**

7



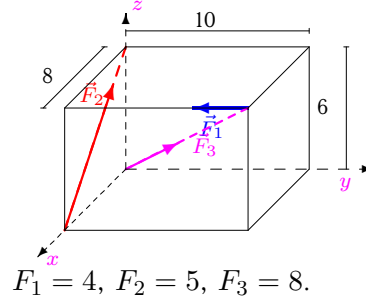
**Задача 12.27.**

7



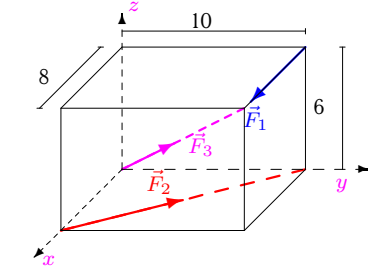
**Задача 12.28.**

7



**Задача 12.29.**

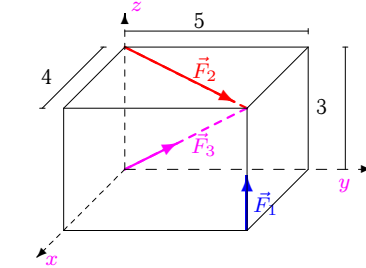
7



$F_1 = 2, F_2 = 3, F_3 = 5.$

**Задача 12.30.**

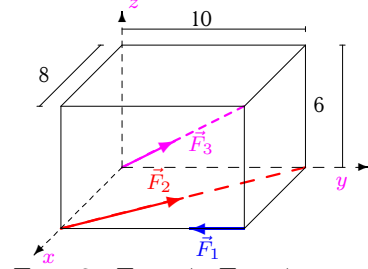
7



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

**Задача 12.31.**

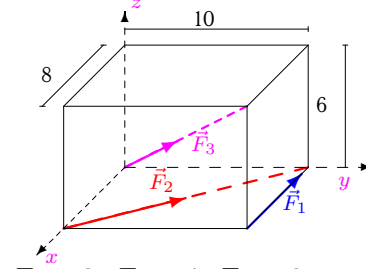
7



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

**Задача 12.32.**

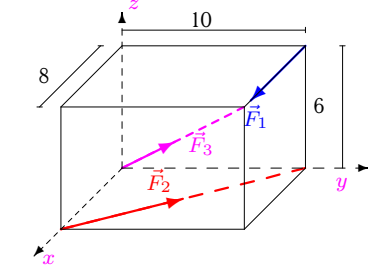
7



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

**Задача 12.33.**

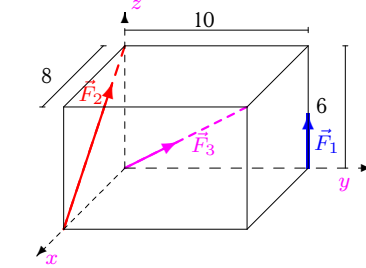
7



$F_1 = 2, F_2 = 3, F_3 = 5.$

**Задача 12.34.**

7



$F_1 = 1, F_2 = 2, F_3 = 3.$

## 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	5.327	6.659	-1.879	8.732	-29.370	23.496	0.000	37.612	0.000	0.000	12.507	15.634
2	0.994	2.243	4.346	4.990	12.000	-14.400	0.000	18.745	-20.365	-4.081	2.892	2.949
3	2.428	3.536	-0.321	4.301	-21.213	14.571	-20.000	32.593	6.426	1.494	41.524	68.644
4	-2.105	7.366	-2.546	8.073	-25.456	20.365	54.988	63.925	63.609	7.879	5.176	9.193
5	2.954	5.878	2.121	6.912	0.000	12.000	-1.259	12.066	67.867	9.818	-1.721	-1.978
6	2.428	3.536	3.921	5.812	0.000	-2.400	-20.000	20.143	-86.912	-14.955	-1.708	1.594
7	1.756	2.195	1.849	3.364	2.657	1.874	0.000	3.252	8.780	2.610	-0.093	0.701
8	3.297	2.121	-1.927	4.369	-10.000	4.800	0.000	11.092	-22.788	-5.216	3.805	3.146
9	-3.164	8.854	2.970	9.860	0.000	-24.000	71.235	75.169	-0.942	-0.096	8.052	-0.010
10	6.028	3.536	-4.279	8.194	-20.000	25.600	0.000	32.486	-30.059	-3.668	6.353	4.044
11	0.448	3.683	2.273	4.351	10.000	0.000	12.494	16.003	32.873	7.555	2.814	4.058
12	-4.040	4.950	0.030	6.389	-29.698	-24.241	40.000	55.404	1.206	0.189	808.830	-981.016
13	3.322	2.902	-1.273	4.591	-8.707	6.965	-5.000	12.220	-2.343	-0.510	5.726	6.550
14	2.954	5.878	-2.121	6.912	-21.213	28.971	-1.259	35.929	110.293	15.956	7.261	13.215
15	1.756	2.195	1.849	3.364	2.657	1.874	0.000	3.252	8.780	2.610	-0.093	0.701
16	5.327	6.659	-6.121	10.497	-39.977	31.982	0.000	51.196	0.000	0.000	5.225	6.531
17	0.330	6.659	0.879	6.725	8.787	-7.029	24.988	27.405	-21.956	-3.265	4.321	10.182
18	2.594	4.243	0.146	4.975	0.000	-2.400	20.000	20.143	-7.271	-1.461	7.925	5.234
19	1.402	5.561	3.394	6.664	24.000	0.000	-0.765	24.012	31.051	4.659	1.146	6.782
20	3.322	2.902	1.273	4.591	-2.343	1.874	-5.000	5.831	-8.707	-1.896	-2.414	-0.762
21	5.327	6.659	-1.879	8.732	-29.370	23.496	0.000	37.612	0.000	0.000	12.507	15.634
22	-2.806	4.243	-0.146	5.089	-25.456	1.165	30.000	39.362	72.000	14.149	-73.031	121.263
23	2.954	5.878	-2.121	6.912	-21.213	28.971	-1.259	35.929	110.293	15.956	7.261	13.215
24	7.160	0.950	-5.370	9.000	-2.849	21.479	-16.000	26.935	85.918	9.546	3.812	1.945
25	-4.040	4.950	5.970	8.744	0.000	-48.000	40.000	62.482	1.206	0.138	8.053	0.011
26	-2.806	4.243	4.946	7.094	0.000	-19.200	30.000	35.618	66.909	9.431	5.023	0.754
27	1.893	7.366	-2.546	8.020	-22.098	5.679	20.000	30.341	-50.912	-6.348	4.521	8.092
28	0.525	1.657	6.394	6.626	24.000	-24.000	-32.000	46.648	-231.765	-34.977	2.386	4.187
29	2.954	5.878	2.121	6.912	0.000	12.000	-1.259	12.066	67.867	9.818	-1.721	-1.978
30	4.137	5.171	4.697	8.119	7.972	-6.378	0.000	10.209	-0.000	-0.000	1.358	1.697
31	1.461	5.073	2.970	6.057	0.000	0.000	0.988	0.988	2.934	0.484	0.137	-0.039
32	-2.105	7.366	2.546	8.073	0.000	0.000	54.988	54.988	139.976	17.339	6.215	1.776
33	2.954	5.878	2.121	6.912	0.000	12.000	-1.259	12.066	67.867	9.818	-1.721	-1.978
34	0.097	2.121	3.473	4.071	10.000	-9.600	0.000	13.862	-19.394	-4.764	2.049	2.912