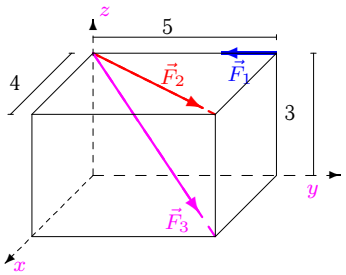
Приведение системы сил

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.

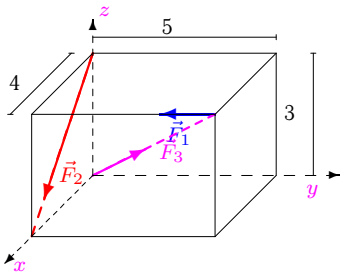
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.111.)

Задача 12.1. 5



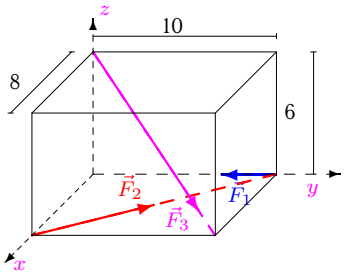
$F_1 = 2,\ F_2 = 2,\ F_3 = 5.$

Задача 12.2. 5



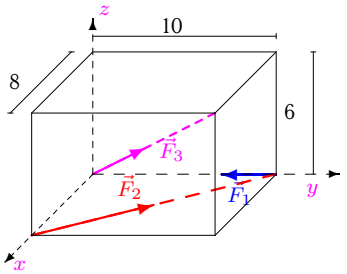
$F_1 = 4,\ F_2 = 4,\ F_3 = 7.$

Задача 12.3. 5



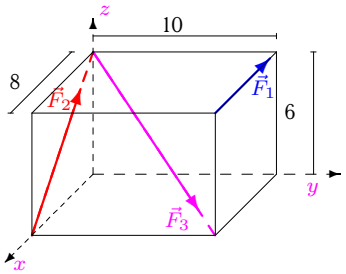
$F_1 = 1,\ F_2 = 2,\ F_3 = 5.$

Задача 12.4. 5



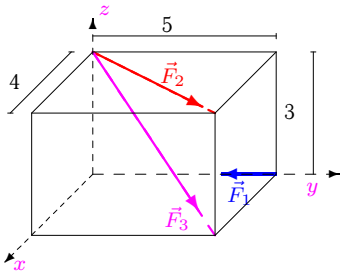
$F_1 = 1,\ F_2 = 2,\ F_3 = 5.$

Задача 12.5. 5



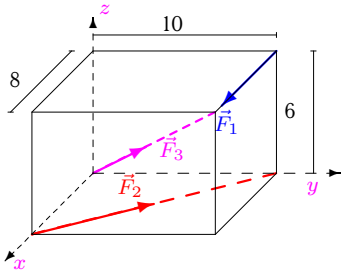
$F_1 = 4,\ F_2 = 5,\ F_3 = 7.$

Задача 12.6. 5



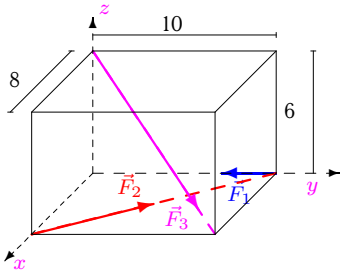
$F_1 = 1,\ F_2 = 1,\ F_3 = 4.$

Задача 12.7. 5



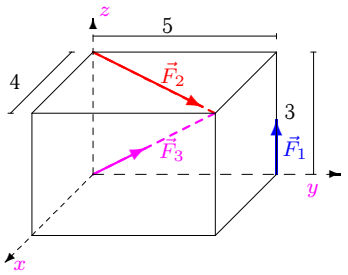
$F_1 = 2,\ F_2 = 3,\ F_3 = 5.$

Задача 12.8. 5



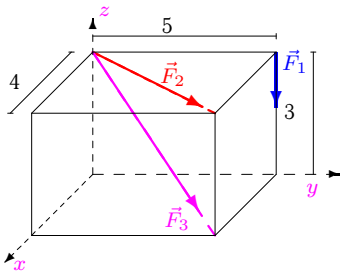
$F_1 = 1,\ F_2 = 2,\ F_3 = 5.$

Задача 12.9. 5



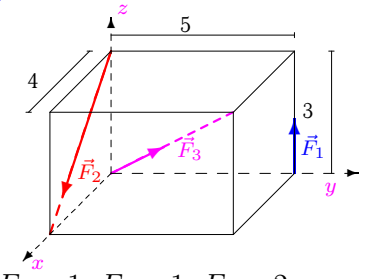
$F_1 = 1,\ F_2 = 1,\ F_3 = 2.$

Задача 12.10. 5



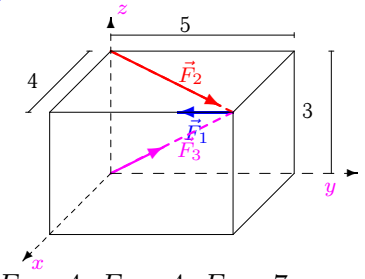
$F_1 = 2,\ F_2 = 2,\ F_3 = 3.$

Задача 12.11. 5



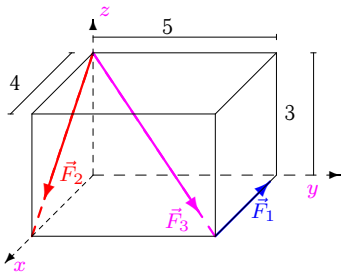
$F_1 = 1,\ F_2 = 1,\ F_3 = 2.$

Задача 12.12. 5



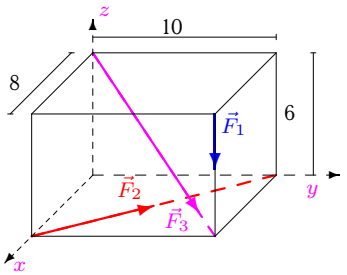
$F_1 = 4,\ F_2 = 4,\ F_3 = 7.$

Задача 12.13. 5



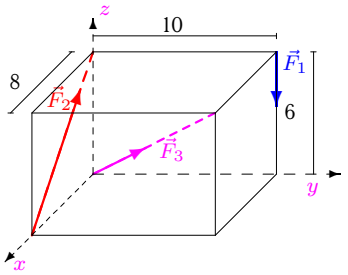
$F_1 = 3,\ F_2 = 3,\ F_3 = 5.$

Задача 12.14. 5



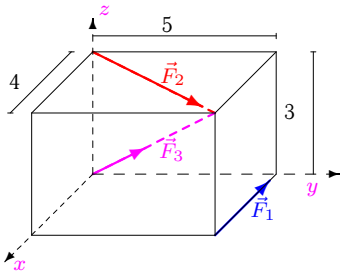
$F_1 = 4,\ F_2 = 5,\ F_3 = 6.$

Задача 12.15. 5



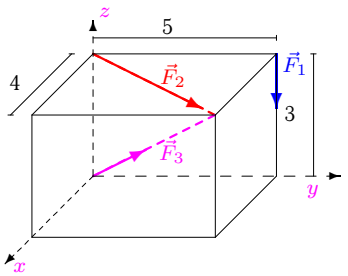
$F_1 = 2,\ F_2 = 3,\ F_3 = 4.$

Задача 12.16. 5



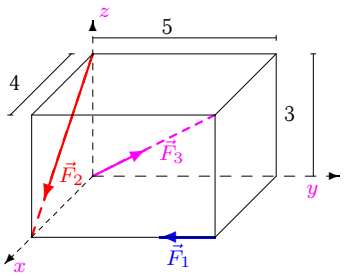
$F_1 = 3,\ F_2 = 3,\ F_3 = 5.$

Задача 12.17. 5



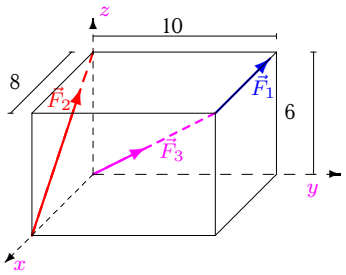
$F_1 = 2,\ F_2 = 2,\ F_3 = 3.$

Задача 12.18. 5



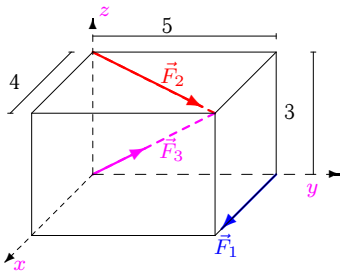
$F_1 = 3,\ F_2 = 3,\ F_3 = 6.$

Задача 12.19. 5



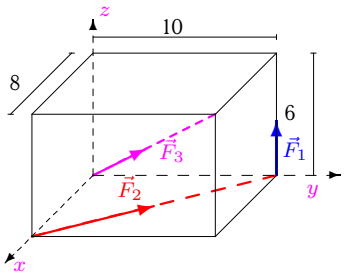
$F_1 = 4,\ F_2 = 5,\ F_3 = 7.$

Задача 12.20. 5



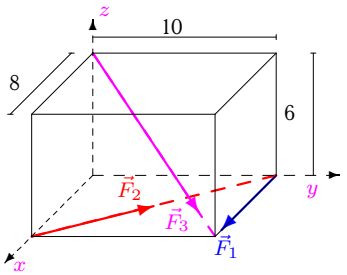
$F_1 = 1,\ F_2 = 1,\ F_3 = 3.$

Задача 12.21. 5



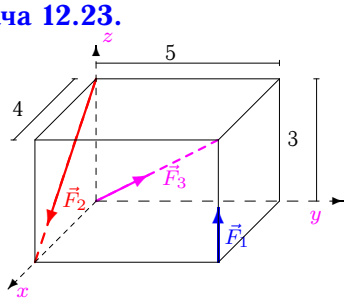
$F_1 = 1,\ F_2 = 2,\ F_3 = 3.$

Задача 12.22. 5



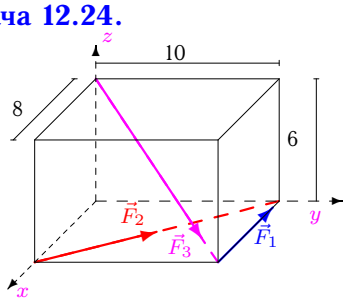
$F_1 = 1,\ F_2 = 2,\ F_3 = 4.$

Задача 12.23. 5



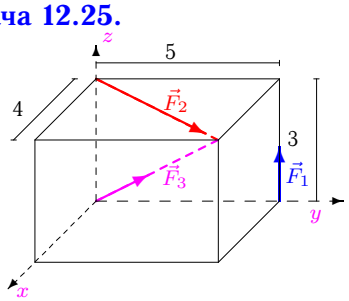
$F_1 = 3,\ F_2 = 3,\ F_3 = 4.$

Задача 12.24. 5



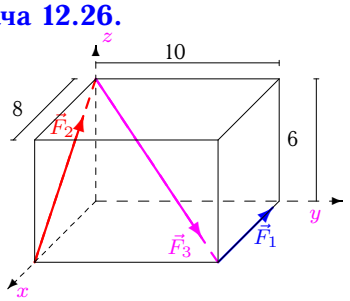
$F_1 = 3,\ F_2 = 4,\ F_3 = 6.$

Задача 12.25. 5



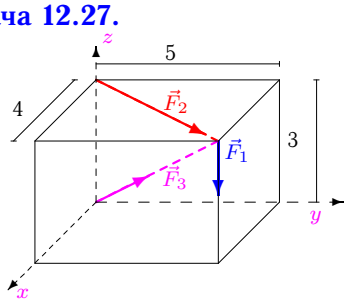
$F_1 = 1,\ F_2 = 1,\ F_3 = 2.$

Задача 12.26. 5



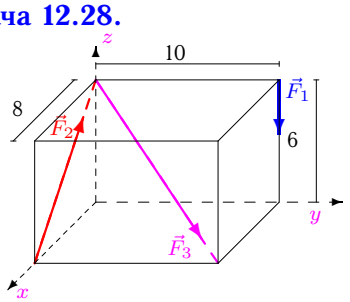
$F_1 = 3,\ F_2 = 4,\ F_3 = 6.$

Задача 12.27. 5



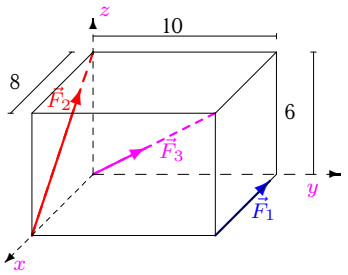
$F_1 = 4,\ F_2 = 4,\ F_3 = 5.$

Задача 12.28. 5



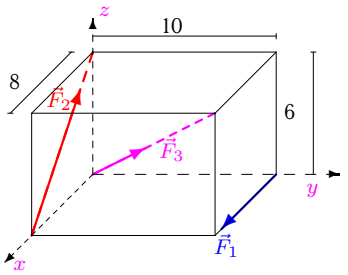
$F_1 = 2,\ F_2 = 3,\ F_3 = 4.$

Задача 12.29. 5



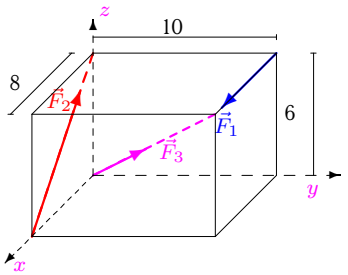
$F_1 = 3,\ F_2 = 4,\ F_3 = 6.$

Задача 12.30. 5



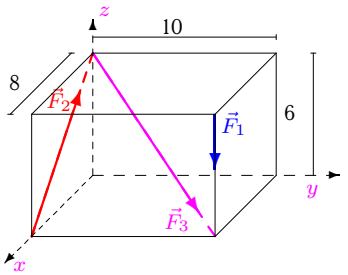
$F_1 = 1,\ F_2 = 2,\ F_3 = 4.$

Задача 12.31. 5



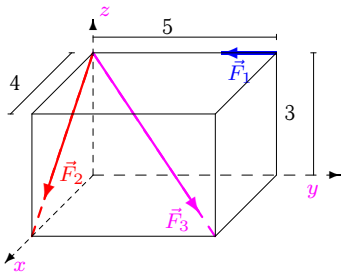
$F_1 = 2,\ F_2 = 3,\ F_3 = 5.$

Задача 12.32. 5



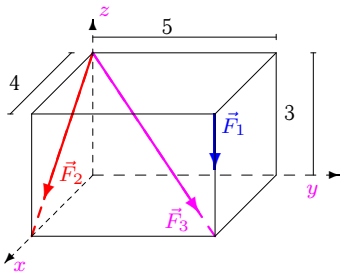
$F_1 = 4,\ F_2 = 5,\ F_3 = 6.$

Задача 12.33. 5



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

Задача 12.34. 5



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

12.5

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	4.078	3.097	-2.121	5.543	-9.292	12.233	0.000	15.362	-0.000	-0.000	5.767	4.380
2	7.160	0.950	0.570	7.245	12.000	9.600	-16.000	22.185	85.918	11.859	-14.118	0.492
3	1.579	4.097	-2.121	4.877	-21.213	16.971	12.494	29.901	9.533	1.955	7.226	10.298
4	1.579	4.097	2.121	4.877	0.000	0.000	12.494	12.494	26.504	5.435	2.153	-0.830
5	-4.040	4.950	0.030	6.389	-29.698	-24.241	40.000	55.404	1.206	0.189	808.830	-981.016
6	2.887	2.609	-1.697	4.246	-10.828	8.662	0.000	13.866	-8.662	-2.040	5.843	5.563
7	2.954	5.878	2.121	6.912	0.000	12.000	-1.259	12.066	67.867	9.818	-1.721	-1.978
8	1.579	4.097	-2.121	4.877	-21.213	16.971	12.494	29.901	9.533	1.955	7.226	10.298
9	1.756	2.195	1.849	3.364	2.657	1.874	0.000	3.252	8.780	2.610	-0.093	0.701
10	2.946	3.683	-3.273	5.741	-21.049	8.839	0.000	22.830	-29.464	-5.132	3.707	5.627
11	1.931	1.414	1.249	2.700	5.000	2.400	0.000	5.546	13.051	4.834	0.106	1.235
12	6.459	4.073	2.970	8.193	2.630	7.496	-16.000	17.864	-0.000	-0.000	-2.524	0.885
13	2.228	3.536	-3.921	5.731	-10.607	15.685	15.000	24.156	-27.000	-4.711	4.741	2.238
14	0.271	8.147	-6.546	10.454	-65.456	52.365	31.235	89.455	204.450	19.557	5.672	10.077
15	-0.137	2.828	1.497	3.203	-20.000	-14.400	0.000	24.645	-37.984	-11.858	2.624	-13.699
16	1.703	5.878	2.121	6.477	-7.028	5.622	15.000	17.493	52.903	8.168	0.844	-4.325
17	2.946	3.683	-0.727	4.772	-14.685	3.748	0.000	15.156	-29.464	-6.174	11.706	14.952
18	5.794	1.243	0.746	5.973	0.000	7.200	-12.000	13.994	0.000	0.000	-9.657	-0.000
19	-4.040	4.950	5.970	8.744	0.000	-48.000	40.000	62.482	1.206	0.138	8.053	0.011
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	0.448	3.683	2.273	4.351	10.000	0.000	12.494	16.003	32.873	7.555	2.814	4.058
22	2.013	4.390	-1.697	5.119	-16.971	13.576	2.494	21.876	21.203	4.142	5.907	10.960
23	4.663	2.828	2.897	6.175	15.000	-4.800	0.000	15.749	56.365	9.127	3.100	2.799
24	-2.105	7.366	-2.546	8.073	-25.456	20.365	54.988	63.925	63.609	7.879	5.176	9.193
25	1.756	2.195	1.849	3.364	2.657	1.874	0.000	3.252	8.780	2.610	-0.093	0.701
26	-2.806	4.243	-0.146	5.089	-25.456	1.165	30.000	39.362	72.000	14.149	-73.031	121.263
27	5.327	6.659	-1.879	8.732	-29.370	23.496	0.000	37.612	0.000	0.000	12.507	15.634
28	-0.137	2.828	-1.897	3.408	-36.971	-0.824	0.000	36.980	2.745	0.805	-0.786	19.471
29	-2.806	4.243	4.946	7.094	0.000	-19.200	30.000	35.618	66.909	9.431	5.023	0.754
30	1.663	2.828	2.897	4.377	0.000	-9.600	-10.000	13.862	-56.123	-12.823	0.454	1.681
31	2.428	3.536	3.921	5.812	0.000	-2.400	-20.000	20.143	-86.912	-14.955	-1.708	1.594
32	-0.606	4.243	-3.546	5.562	-65.456	28.365	0.000	71.337	160.000	28.766	1.812	17.577
33	4.428	1.536	-3.321	5.745	-4.607	13.285	0.000	14.061	0.000	0.000	4.000	1.387
34	6.028	3.536	-8.521	11.021	-30.607	34.085	0.000	45.810	-64.000	-5.807	4.219	3.219