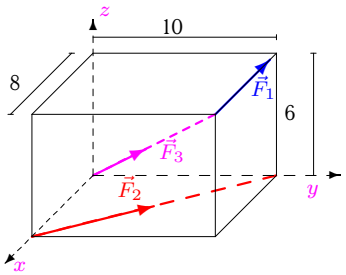
Приведение системы сил

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.

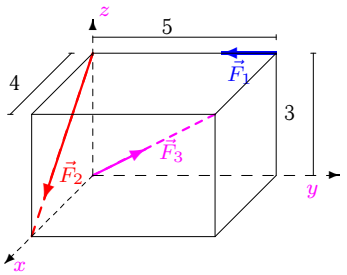
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.111.)

Задача 12.1. 9



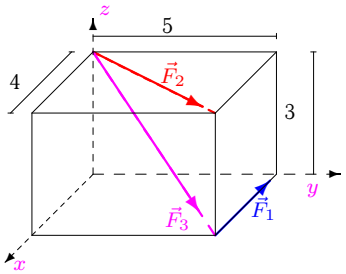
$F_1 = 4,\ F_2 = 5,\ F_3 = 7.$

Задача 12.2. 9



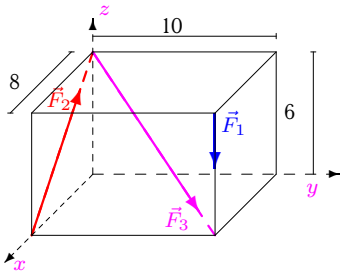
$F_1 = 2,\ F_2 = 2,\ F_3 = 5.$

Задача 12.3. 9



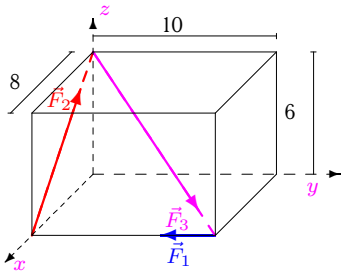
$F_1 = 3,\ F_2 = 3,\ F_3 = 5.$

Задача 12.4. 9



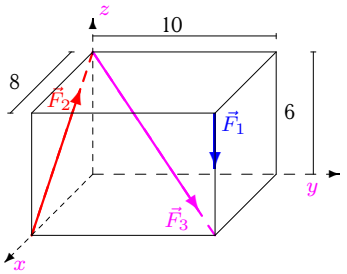
$F_1 = 4,\ F_2 = 5,\ F_3 = 6.$

Задача 12.5. 9



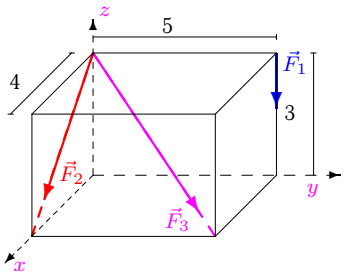
$F_1 = 3,\ F_2 = 4,\ F_3 = 7.$

Задача 12.6. 9



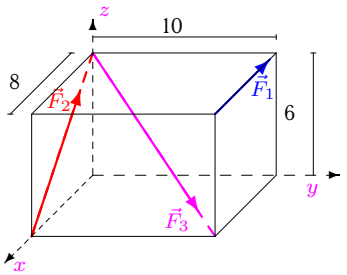
$F_1 = 4,\ F_2 = 5,\ F_3 = 6.$

Задача 12.7. 9



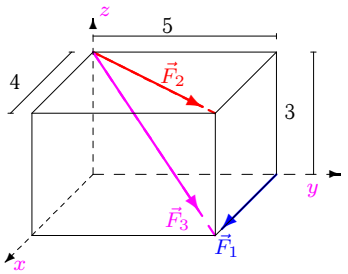
$F_1 = 2,\ F_2 = 2,\ F_3 = 3.$

Задача 12.8. 9



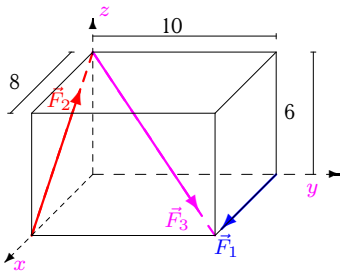
$F_1 = 4,\ F_2 = 5,\ F_3 = 7.$

Задача 12.9. 9



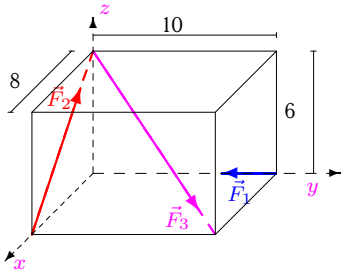
$F_1 = 1,\ F_2 = 1,\ F_3 = 3.$

Задача 12.10. 9



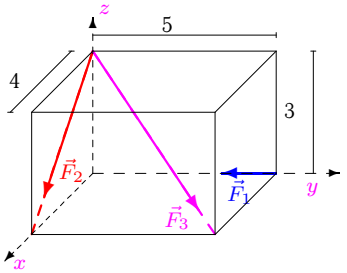
$F_1 = 1,\ F_2 = 2,\ F_3 = 4.$

Задача 12.11. 9



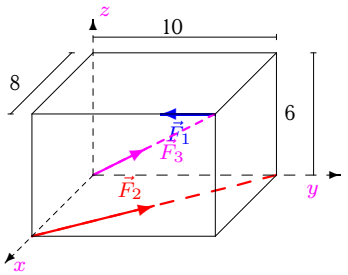
$F_1 = 1,\ F_2 = 2,\ F_3 = 5.$

Задача 12.12. 9



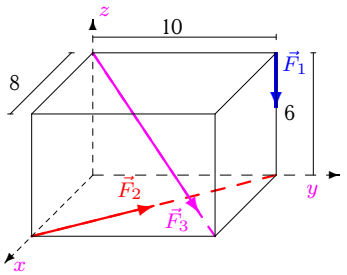
$F_1 = 1,\ F_2 = 1,\ F_3 = 4.$

Задача 12.13. 9



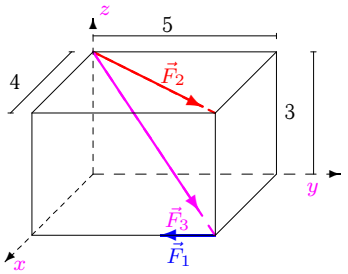
$F_1 = 4,\ F_2 = 5,\ F_3 = 8.$

Задача 12.14. 9



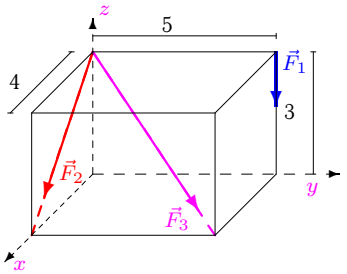
$F_1 = 2,\ F_2 = 3,\ F_3 = 4.$

Задача 12.15. 9



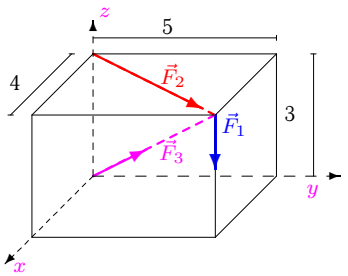
$F_1 = 3,\ F_2 = 3,\ F_3 = 6.$

Задача 12.16. 9



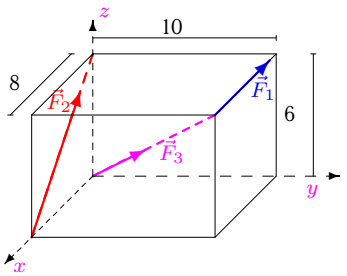
$F_1 = 2,\ F_2 = 2,\ F_3 = 3.$

Задача 12.17. 9



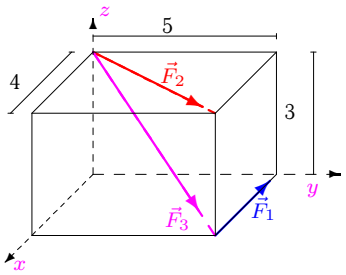
$F_1 = 4,\ F_2 = 4,\ F_3 = 5.$

Задача 12.18. 9



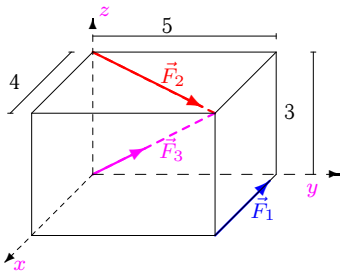
$F_1 = 4,\ F_2 = 5,\ F_3 = 7.$

Задача 12.19. 9



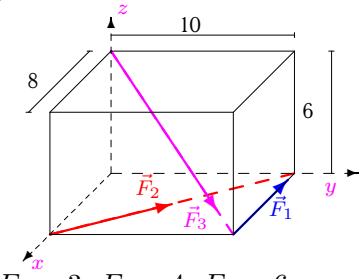
$F_1 = 3,\ F_2 = 3,\ F_3 = 5.$

Задача 12.20. 9



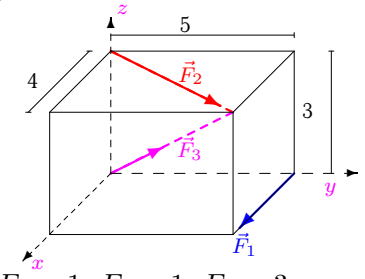
$F_1 = 3,\ F_2 = 3,\ F_3 = 5.$

Задача 12.21. 9



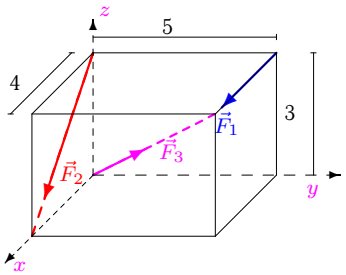
$F_1 = 3,\ F_2 = 4,\ F_3 = 6.$

Задача 12.22. 9



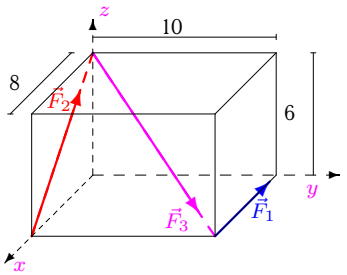
$F_1 = 1,\ F_2 = 1,\ F_3 = 3.$

Задача 12.23. 9



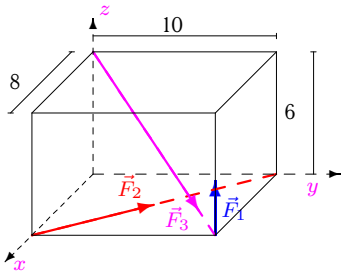
$F_1 = 2,\ F_2 = 2,\ F_3 = 4.$

Задача 12.24. 9



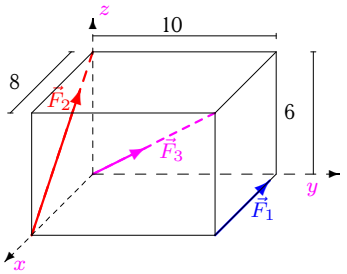
$F_1 = 3,\ F_2 = 4,\ F_3 = 6.$

Задача 12.25. 9



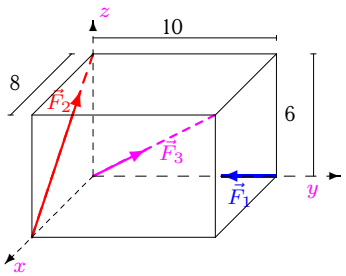
$F_1 = 3,\ F_2 = 4,\ F_3 = 5.$

Задача 12.26. 9



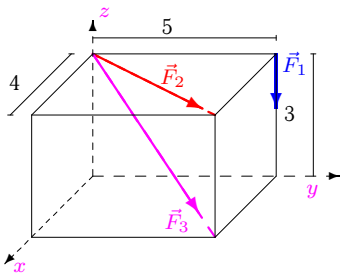
$F_1 = 3,\ F_2 = 4,\ F_3 = 6.$

Задача 12.27. 9



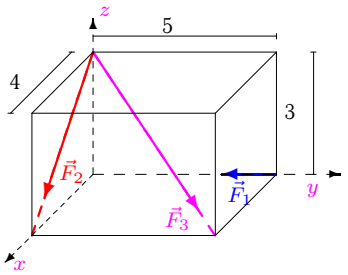
$F_1 = 1,\ F_2 = 2,\ F_3 = 5.$

Задача 12.28. 9



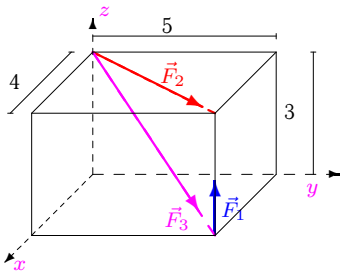
$F_1 = 2,\ F_2 = 2,\ F_3 = 3.$

Задача 12.29. 9



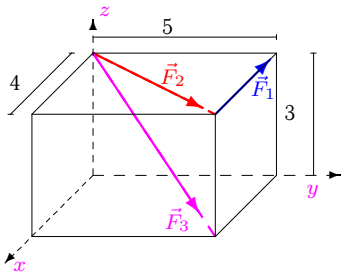
$F_1 = 1,\ F_2 = 1,\ F_3 = 4.$

Задача 12.30. 9



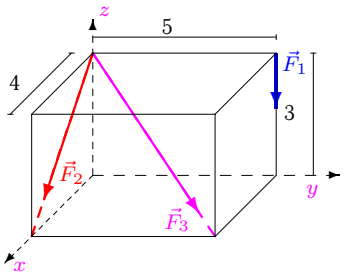
$F_1 = 3,\ F_2 = 3,\ F_3 = 4.$

Задача 12.31. 9



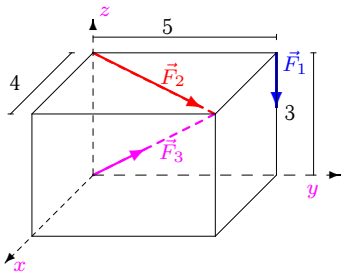
$F_1 = 4,\ F_2 = 4,\ F_3 = 6.$

Задача 12.32. 9



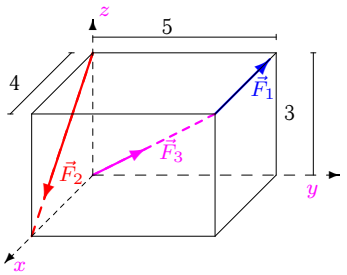
$F_1 = 2,\ F_2 = 2,\ F_3 = 3.$

Задача 12.33. 9



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

Задача 12.34. 9



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

12.9

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	-3.164	8.854	2.970	9.860	0.000	-24.000	71.235	75.169	-0.942	-0.096	8.052	-0.010
2	4.428	1.536	0.921	4.777	6.000	4.800	0.000	7.684	33.941	7.105	-2.731	-0.637
3	1.703	5.878	-2.121	6.477	-17.634	14.108	15.000	27.111	21.083	3.255	5.258	8.716
4	-0.606	4.243	-3.546	5.562	-65.456	28.365	0.000	71.337	160.000	28.766	1.812	17.577
5	0.760	1.950	-0.570	2.169	-29.698	4.559	-24.000	38.455	-0.000	-0.000	8.000	52.116
6	-0.606	4.243	-3.546	5.562	-65.456	28.365	0.000	71.337	160.000	28.766	1.812	17.577
7	3.297	2.121	-4.473	5.948	-16.364	9.891	0.000	19.121	-32.971	-5.543	2.653	2.972
8	-4.040	4.950	0.030	6.389	-29.698	-24.241	40.000	55.404	1.206	0.189	808.830	-981.016
9	3.322	2.902	-1.273	4.591	-8.707	6.965	-5.000	12.220	-2.343	-0.510	5.726	6.550
10	1.663	2.828	-0.497	3.318	-16.971	3.976	-10.000	20.095	-12.000	-3.616	14.201	30.497
11	1.228	2.536	-0.921	2.964	-21.213	7.371	0.000	22.457	-7.371	-2.486	10.308	21.906
12	3.063	1.828	-2.297	4.243	-8.485	9.188	0.000	12.507	-9.188	-2.166	4.406	3.013
13	1.402	5.561	3.394	6.664	24.000	0.000	-0.765	24.012	31.051	4.659	1.146	6.782
14	0.389	5.171	-3.697	6.369	-36.971	13.576	18.741	43.616	-13.451	-2.112	4.136	9.965
15	5.268	3.585	-2.546	6.862	-19.756	15.805	-12.000	28.001	-16.867	-2.458	6.713	7.019
16	3.297	2.121	-4.473	5.948	-16.364	9.891	0.000	19.121	-32.971	-5.543	2.653	2.972
17	5.327	6.659	-1.879	8.732	-29.370	23.496	0.000	37.612	0.000	0.000	12.507	15.634
18	-4.040	4.950	5.970	8.744	0.000	-48.000	40.000	62.482	1.206	0.138	8.053	0.011
19	1.703	5.878	-2.121	6.477	-17.634	14.108	15.000	27.111	21.083	3.255	5.258	8.716
20	1.703	5.878	2.121	6.477	-7.028	5.622	15.000	17.493	52.903	8.168	0.844	-4.325
21	-2.105	7.366	-2.546	8.073	-25.456	20.365	54.988	63.925	63.609	7.879	5.176	9.193
22	3.322	2.902	1.273	4.591	-2.343	1.874	-5.000	5.831	-8.707	-1.896	-2.414	-0.762
23	5.863	2.828	0.497	6.528	0.000	10.800	-10.000	14.719	25.576	3.918	-18.313	-7.078
24	-2.806	4.243	-0.146	5.089	-25.456	1.165	30.000	39.362	72.000	14.149	-73.031	121.263
25	0.330	6.659	0.879	6.725	8.787	-7.029	24.988	27.405	-21.956	-3.265	4.321	10.182
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	1.228	2.536	3.321	4.355	0.000	-9.600	0.000	9.600	-24.341	-5.589	1.911	0.475
28	2.946	3.683	-3.273	5.741	-21.049	8.839	0.000	22.830	-29.464	-5.132	3.707	5.627
29	3.063	1.828	-2.297	4.243	-8.485	9.188	0.000	12.507	-9.188	-2.166	4.406	3.013
30	4.137	5.171	1.303	6.749	-0.513	0.410	0.000	0.657	-0.000	-0.000	-0.315	-0.394
31	1.893	7.366	-2.546	8.020	-22.098	5.679	20.000	30.341	-50.912	-6.348	4.521	8.092
32	3.297	2.121	-4.473	5.948	-16.364	9.891	0.000	19.121	-32.971	-5.543	2.653	2.972
33	2.946	3.683	-0.727	4.772	-14.685	3.748	0.000	15.156	-29.464	-6.174	11.706	14.952
34	2.594	4.243	0.146	4.975	0.000	-2.400	20.000	20.143	-7.271	-1.461	7.925	5.234