

Динамические реакции вала

Кирсанов М.Н. **Решебник. Теоретическая механика** с. 272.

Вариант 1

$a = 40 \text{ см}, b = 50 \text{ см},$
 $c = 45 \text{ см}, R = 50 \text{ см},$
 $m_1 = 80 \text{ кг}, m_2 = 6 \text{ кг},$
 $\alpha = 0.13 \text{ рад}, L = 30 \text{ см},$
 $M_z = 6.3 \text{ Нм}, t = 3 \text{ с}.$

Вариант 2

$a = 45 \text{ см}, b = 65 \text{ см},$
 $c = 55 \text{ см}, R = 50 \text{ см},$
 $m_1 = 70 \text{ кг}, m_2 = 18 \text{ кг},$
 $\alpha = 0.18 \text{ рад}, L = 35 \text{ см},$
 $M_z = 1.8 \text{ Нм}, t = 6 \text{ с}.$

Вариант 3

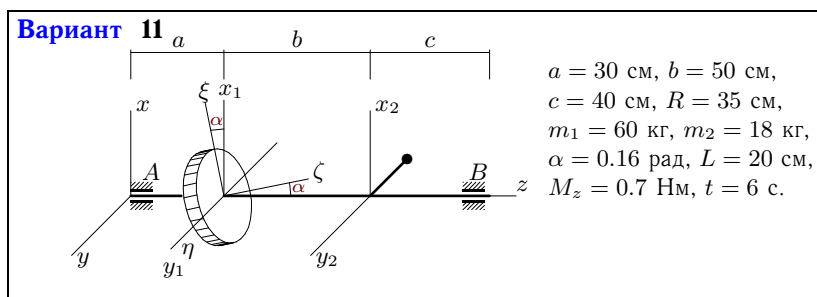
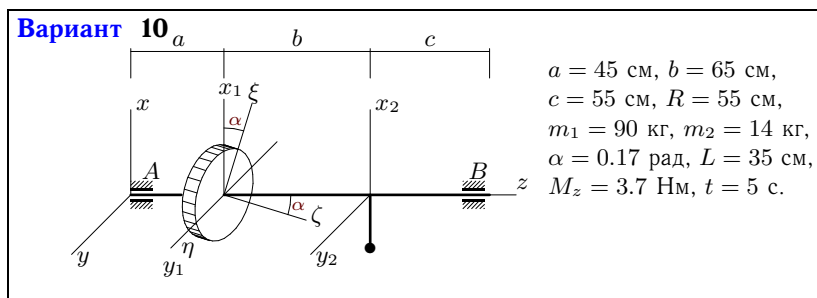
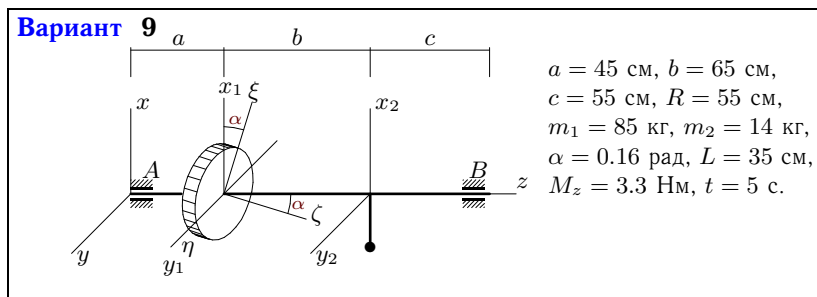
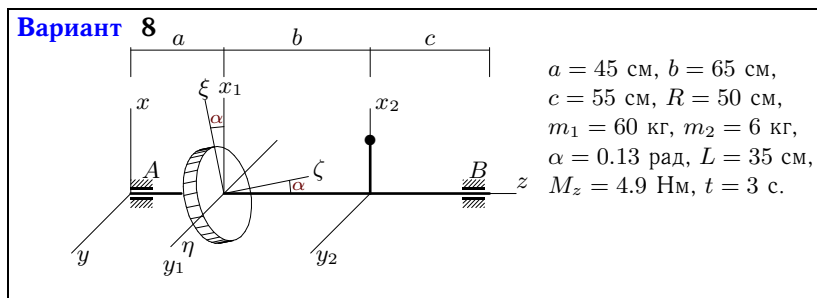
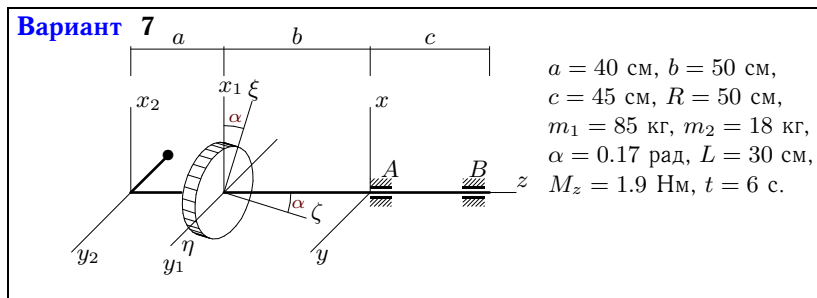
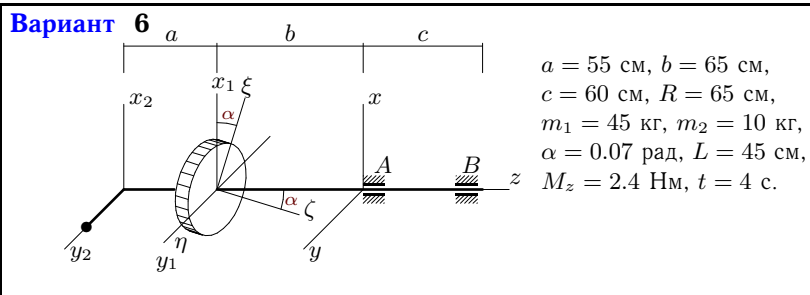
$a = 40 \text{ см}, b = 60 \text{ см},$
 $c = 50 \text{ см}, R = 45 \text{ см},$
 $m_1 = 40 \text{ кг}, m_2 = 18 \text{ кг},$
 $\alpha = 0.12 \text{ рад}, L = 30 \text{ см},$
 $M_z = 0.7 \text{ Нм}, t = 6 \text{ с}.$

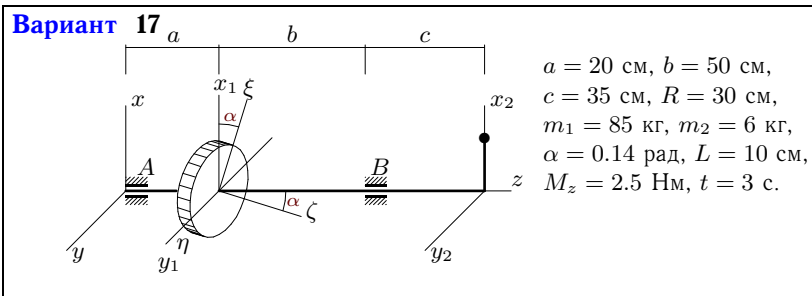
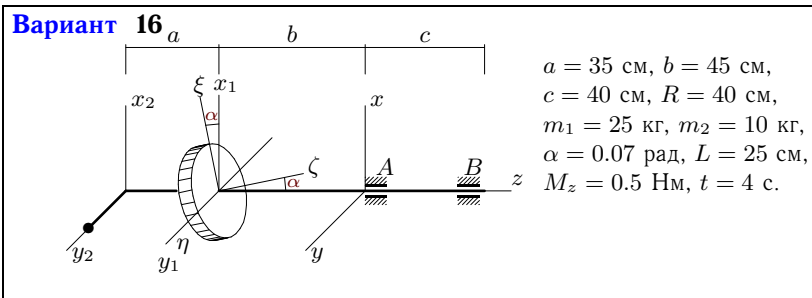
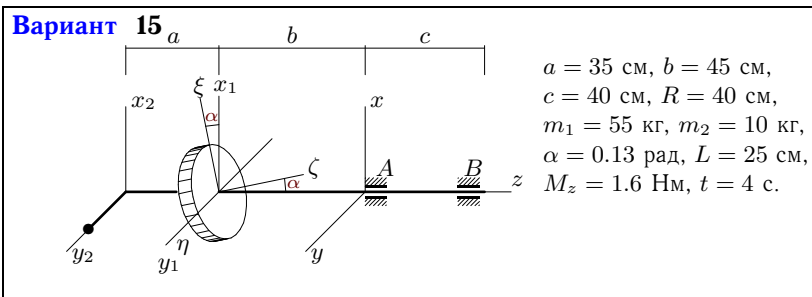
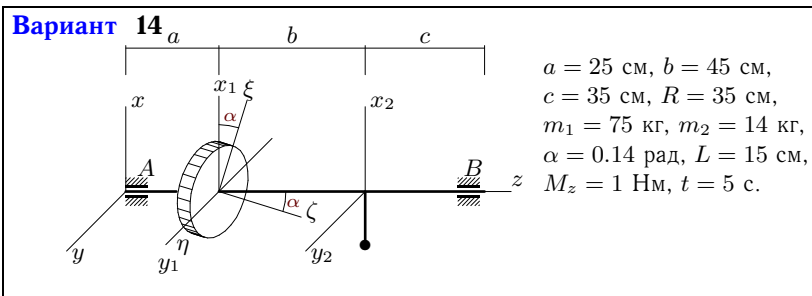
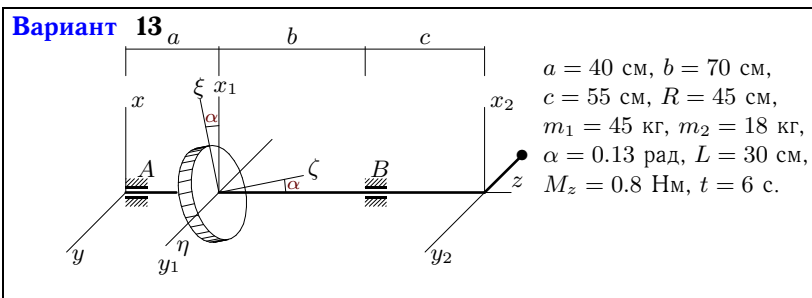
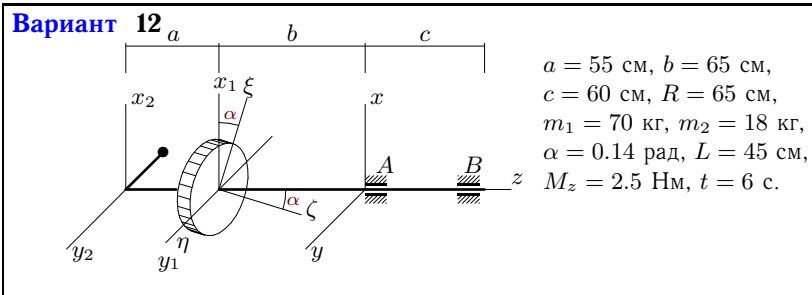
Вариант 4

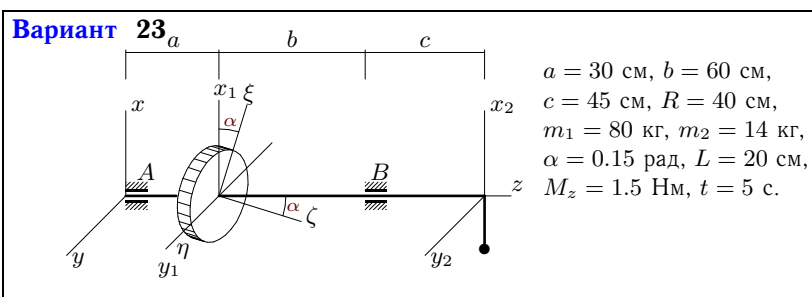
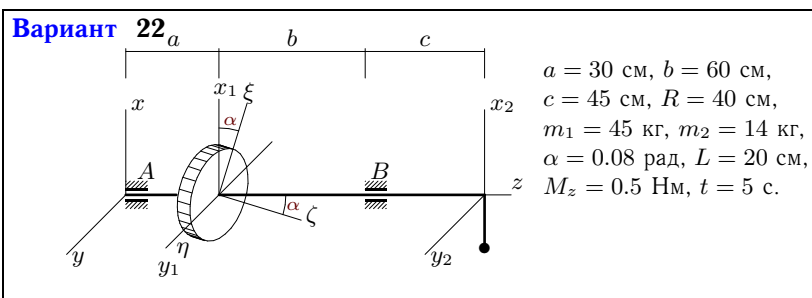
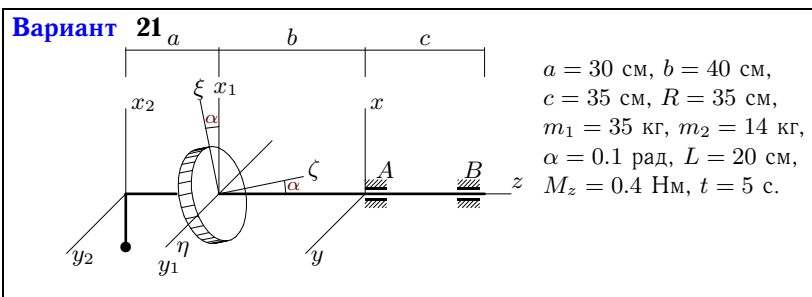
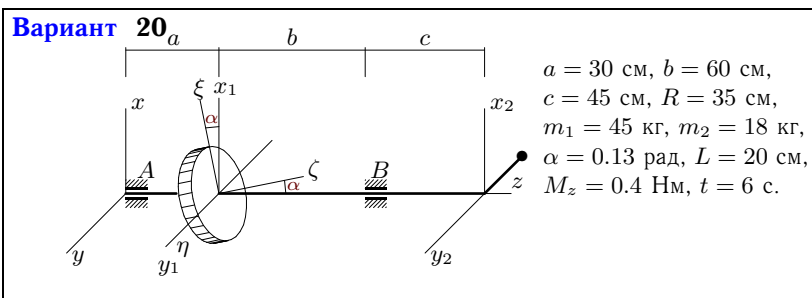
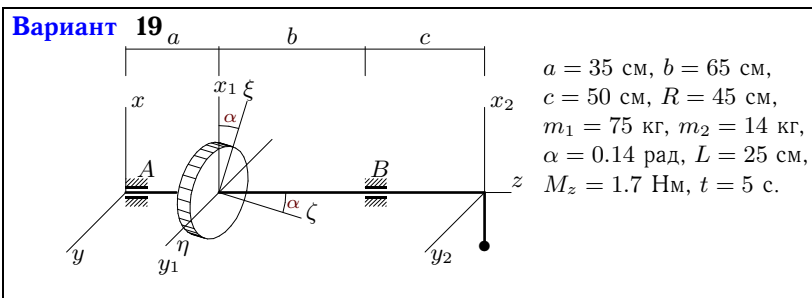
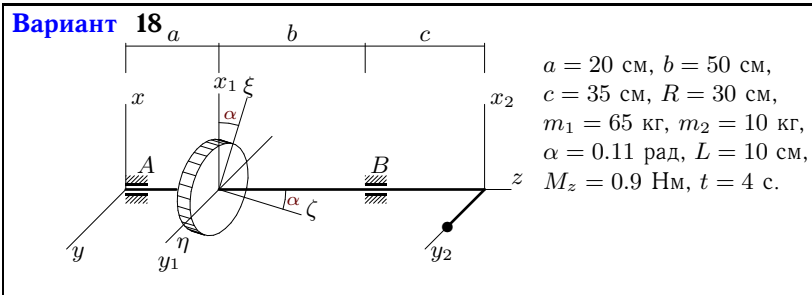
$a = 25 \text{ см}, b = 45 \text{ см},$
 $c = 35 \text{ см}, R = 30 \text{ см},$
 $m_1 = 25 \text{ кг}, m_2 = 18 \text{ кг},$
 $\alpha = 0.09 \text{ рад}, L = 15 \text{ см},$
 $M_z = 0.1 \text{ Нм}, t = 6 \text{ с}.$

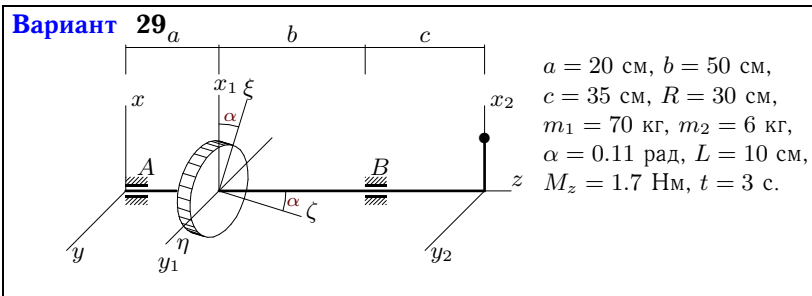
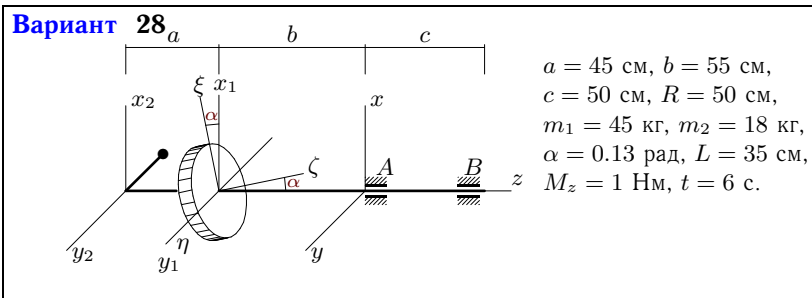
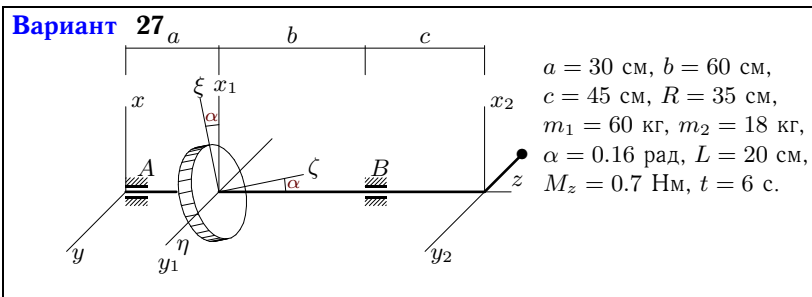
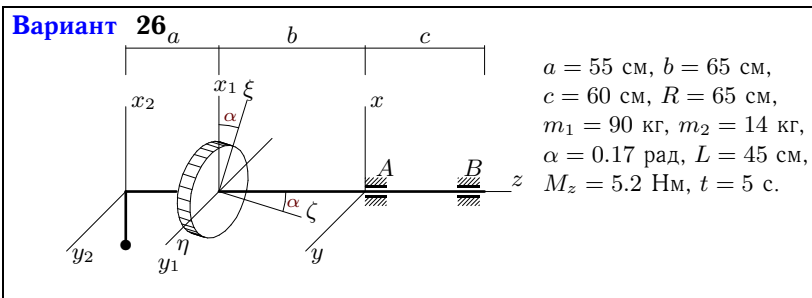
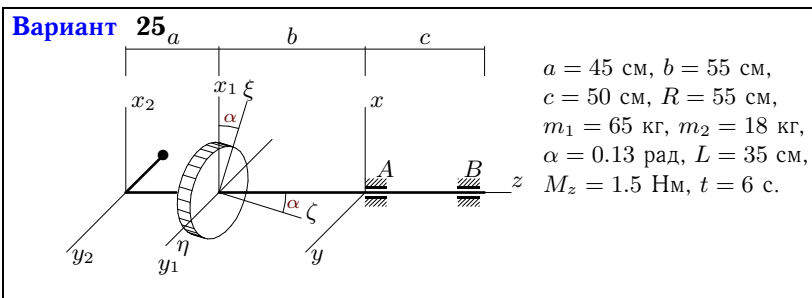
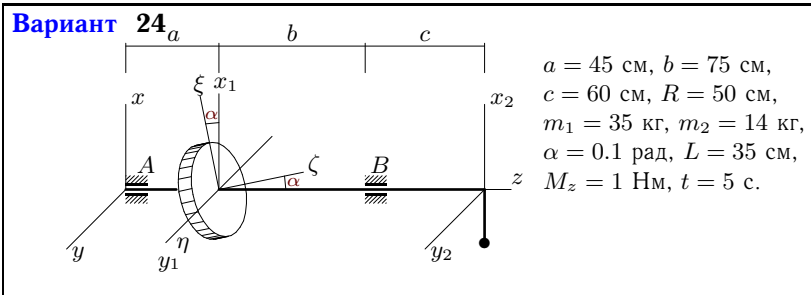
Вариант 5

$a = 25 \text{ см}, b = 55 \text{ см},$
 $c = 40 \text{ см}, R = 35 \text{ см},$
 $m_1 = 85 \text{ кг}, m_2 = 10 \text{ кг},$
 $\alpha = 0.15 \text{ рад}, L = 15 \text{ см},$
 $M_z = 1.9 \text{ Нм}, t = 4 \text{ с}.$

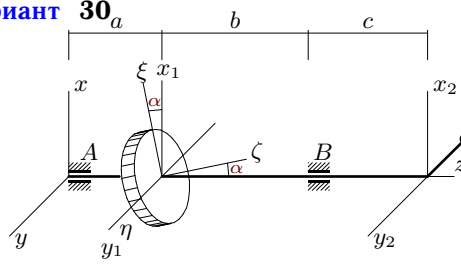








Вариант 30



$a = 30$ см, $b = 60$ см,
 $c = 45$ см, $R = 35$ см,
 $m_1 = 35$ кг, $m_2 = 18$ кг,
 $\alpha = 0.11$ рад, $L = 20$ см,
 $M_z = 0.3$ Нм, $t = 6$ с.

Отвѣты

	ε	ω	x_c	y_c	z_c	X_A	Y_A	X_B	Y_B
1	0.598	1.793	2.093	0.000	-52.791	-12.719	2.364	6.931	-1.288
2	0.164	0.986	0.000	-7.159	58.295	-0.119	2.119	1.154	4.004
3	0.123	0.741	0.000	-9.310	58.621	0.133	1.008	0.533	1.955
4	0.065	0.392	0.000	-6.279	43.837	0.051	0.142	0.125	0.274
5	0.350	1.399	0.000	1.579	35.000	1.218	1.298	-1.743	-4.235
6	0.208	0.833	0.000	8.182	-75.000	-2.425	-9.472	1.489	6.353
7	0.155	0.931	0.000	-5.243	-56.990	4.253	13.730	-3.415	-9.049
8	0.595	1.785	3.182	0.000	50.909	-3.172	0.592	-3.520	0.657
9	0.226	1.132	-4.949	0.000	54.192	2.894	-0.511	3.389	-0.599
10	0.241	1.207	-4.712	0.000	53.750	3.401	-0.564	3.737	-0.619
11	0.159	0.956	0.000	-4.615	41.538	-0.033	1.135	0.606	2.153
12	0.136	0.814	0.000	-9.205	-76.250	4.438	15.858	-3.340	-10.494
13	0.130	0.777	0.000	-8.571	75.714	-0.512	-1.596	1.212	4.857
14	0.204	1.019	-2.360	0.000	32.079	1.044	-0.205	1.135	-0.223
15	0.318	1.274	0.000	3.846	-50.385	-3.548	-11.938	2.752	7.883
16	0.190	0.762	0.000	7.143	-55.000	-1.530	-4.320	1.054	2.869
17	0.644	1.931	0.659	0.000	25.604	2.544	-0.439	-4.780	0.825
18	0.298	1.190	0.000	1.333	31.333	0.474	0.640	-0.772	-2.056
19	0.201	1.004	-3.933	0.000	53.090	-1.227	0.245	4.753	-0.947
20	0.115	0.690	0.000	-5.714	60.000	-0.302	-0.835	0.716	2.551
21	0.148	0.740	-5.714	0.000	-48.571	4.429	-1.197	-2.897	0.783
22	0.120	0.601	-4.746	0.000	54.915	-0.448	0.149	1.459	-0.486
23	0.216	1.078	-2.979	0.000	45.638	-1.006	0.187	4.258	-0.790
24	0.164	0.821	-10.000	0.000	83.571	-1.774	0.432	5.077	-1.237
25	0.125	0.748	0.000	-7.590	-64.759	3.070	10.408	-2.285	-6.886
26	0.238	1.190	-6.058	0.000	-72.404	30.582	-5.140	-21.659	3.640
27	0.159	0.956	0.000	-4.615	54.231	-0.585	-1.592	1.158	4.879
28	0.128	0.766	0.000	-10.000	-67.857	1.984	11.191	-1.180	-7.492
29	0.530	1.589	0.789	0.000	26.711	1.382	-0.290	-2.897	0.608
30	0.105	0.629	0.000	-6.792	65.660	-0.240	-0.697	0.617	2.120