

## Динамические реакции вала

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

**Вариант 1**

$a = 40 \text{ см}, b = 50 \text{ см},$   
 $c = 45 \text{ см}, R = 50 \text{ см},$   
 $m_1 = 90 \text{ кг}, m_2 = 14 \text{ кг},$   
 $\alpha = 0.17 \text{ рад}, L = 30 \text{ см},$   
 $M_z = 3 \text{ Нм}, t = 5 \text{ с}.$

**Вариант 2**

$a = 40 \text{ см}, b = 70 \text{ см},$   
 $c = 55 \text{ см}, R = 50 \text{ см},$   
 $m_1 = 45 \text{ кг}, m_2 = 14 \text{ кг},$   
 $\alpha = 0.08 \text{ рад}, L = 30 \text{ см},$   
 $M_z = 0.9 \text{ Нм}, t = 5 \text{ с}.$

**Вариант 3**

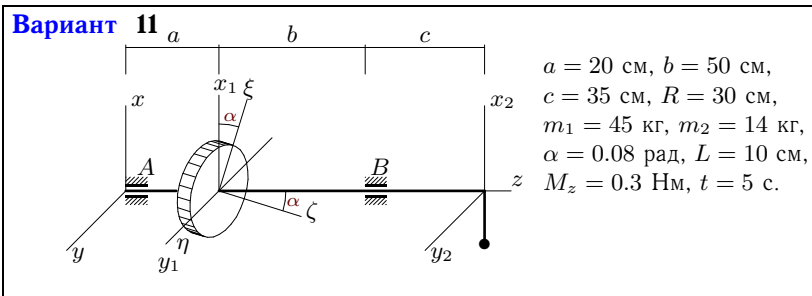
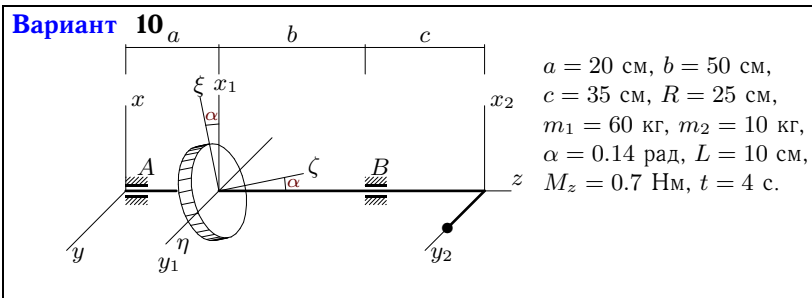
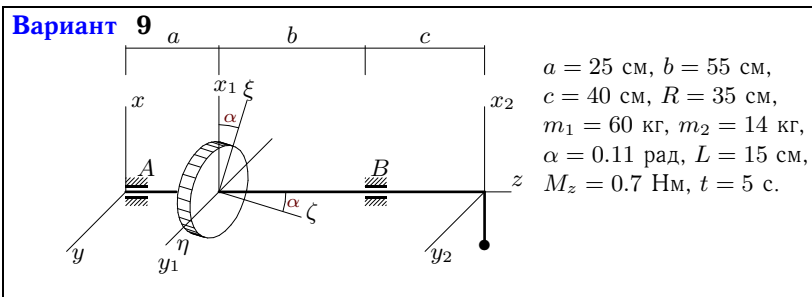
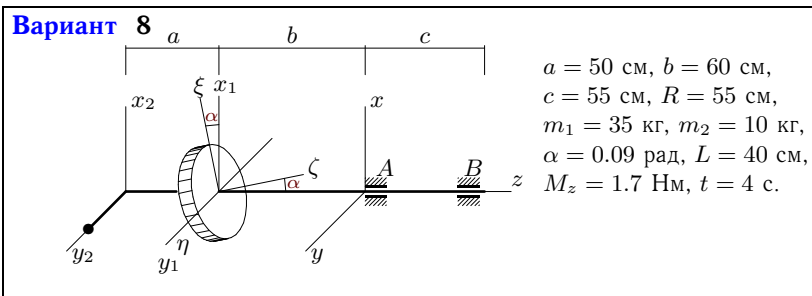
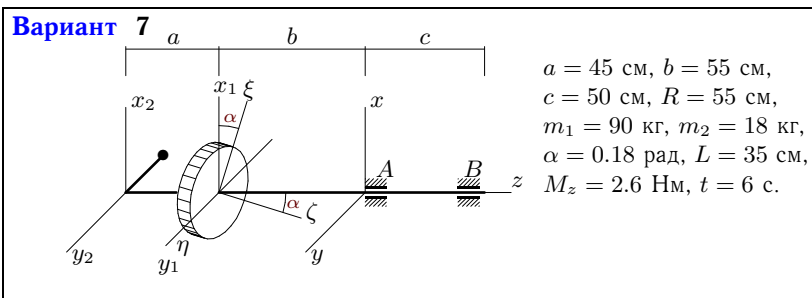
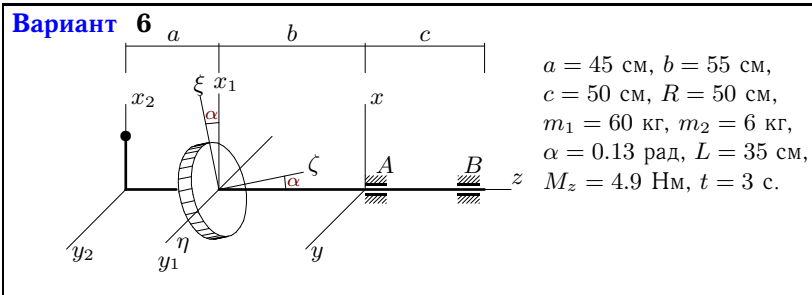
$a = 50 \text{ см}, b = 70 \text{ см},$   
 $c = 60 \text{ см}, R = 60 \text{ см},$   
 $m_1 = 75 \text{ кг}, m_2 = 10 \text{ кг},$   
 $\alpha = 0.13 \text{ рад}, L = 40 \text{ см},$   
 $M_z = 4.8 \text{ Нм}, t = 4 \text{ с}.$

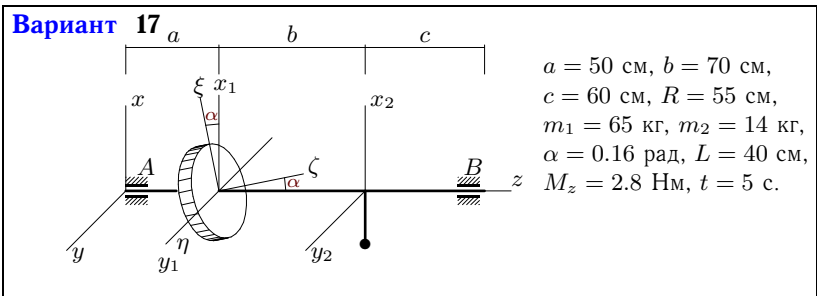
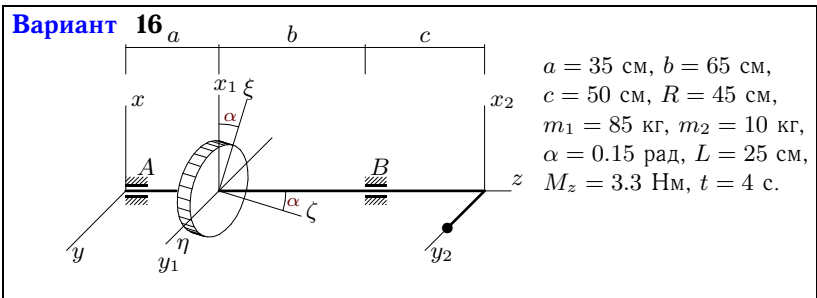
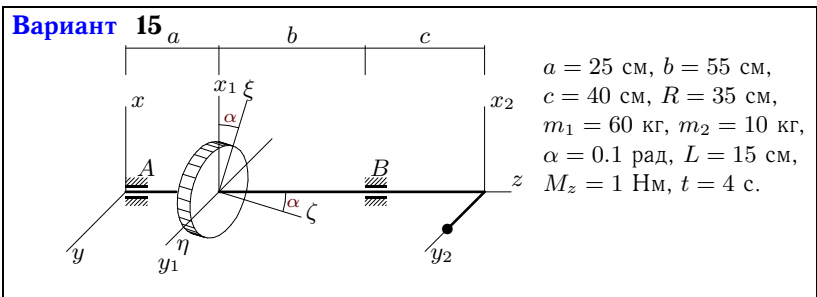
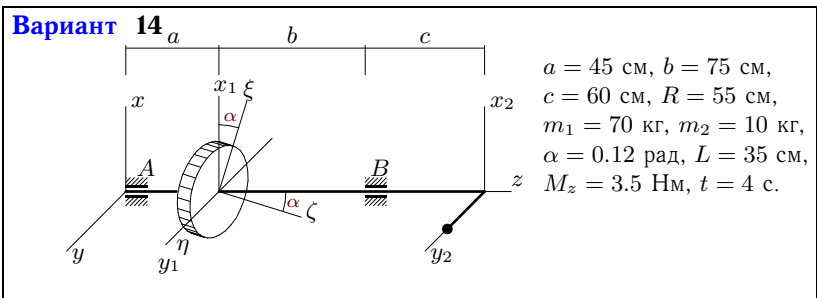
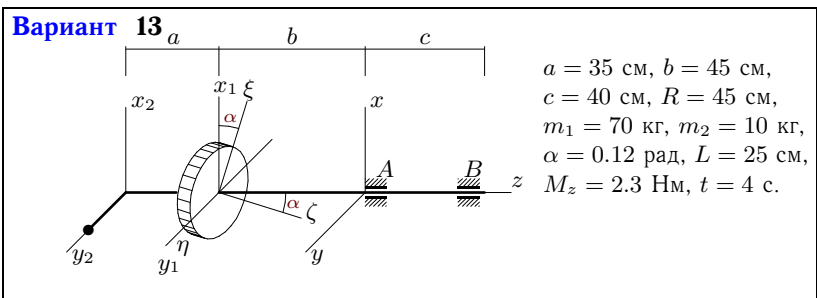
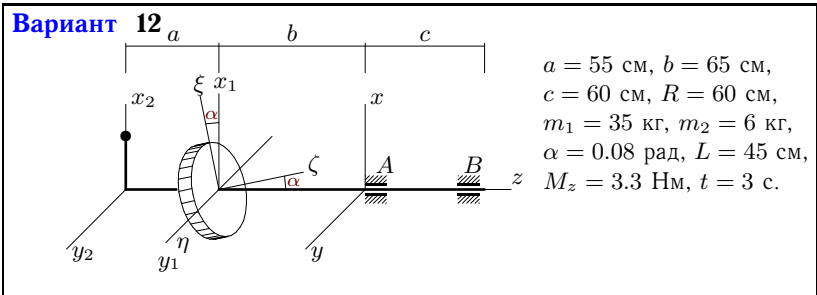
**Вариант 4**

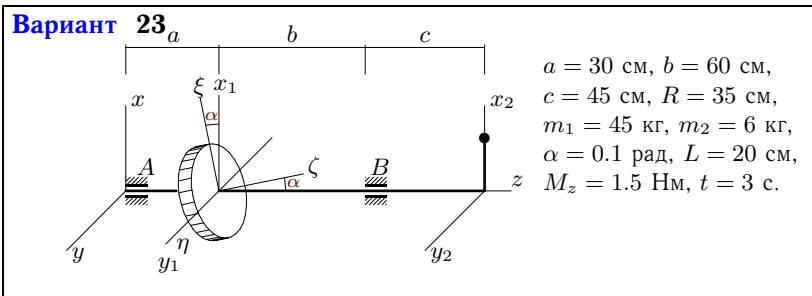
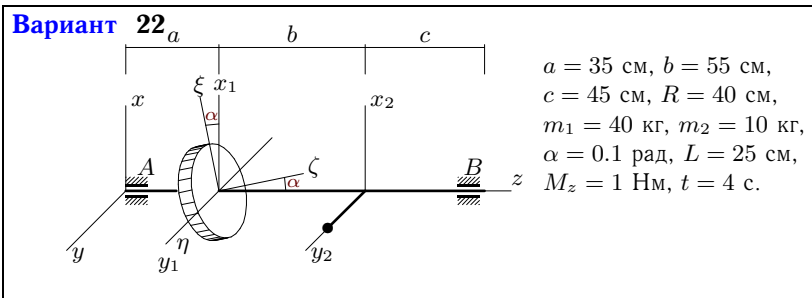
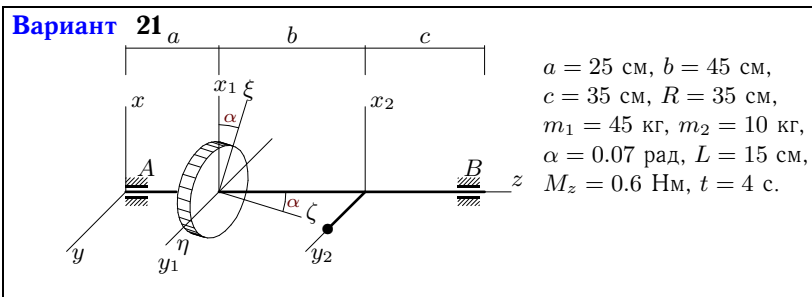
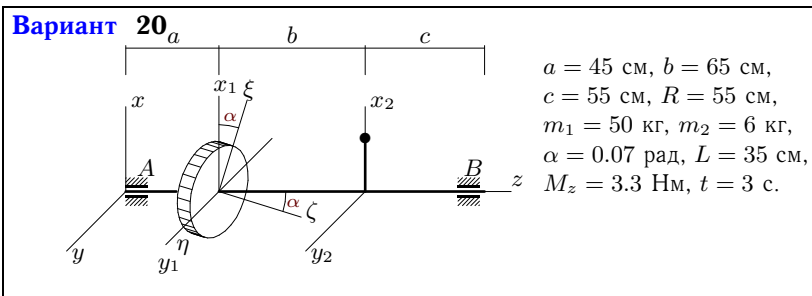
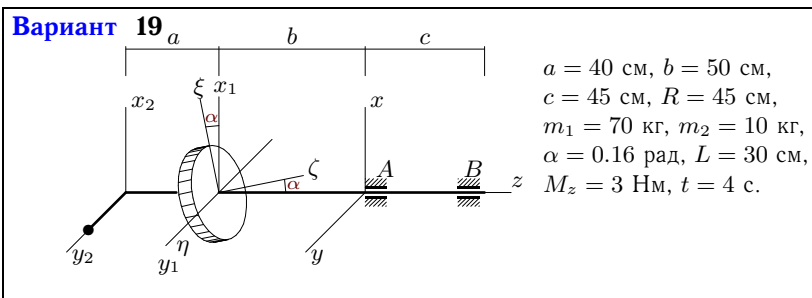
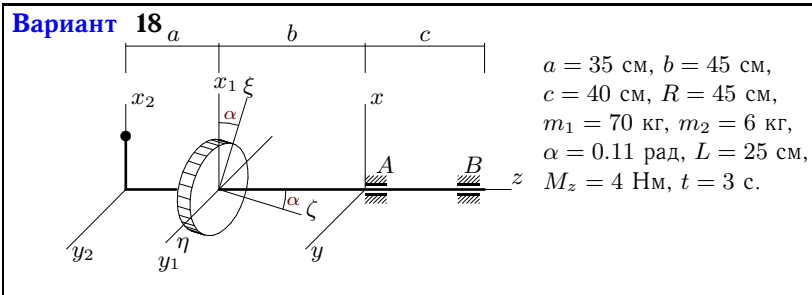
$a = 25 \text{ см}, b = 45 \text{ см},$   
 $c = 35 \text{ см}, R = 30 \text{ см},$   
 $m_1 = 40 \text{ кг}, m_2 = 6 \text{ кг},$   
 $\alpha = 0.09 \text{ рад}, L = 15 \text{ см},$   
 $M_z = 0.9 \text{ Нм}, t = 3 \text{ с}.$

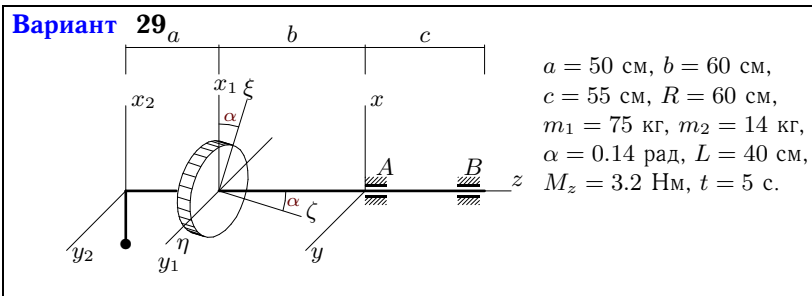
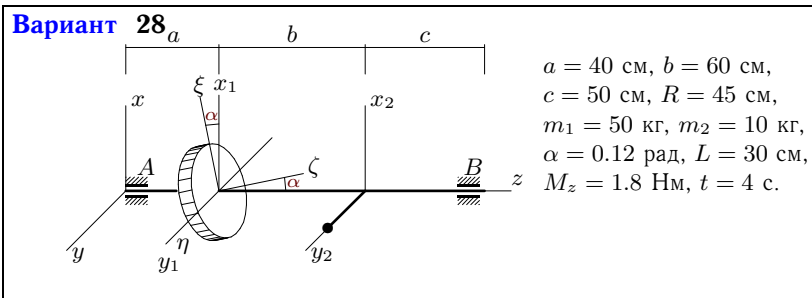
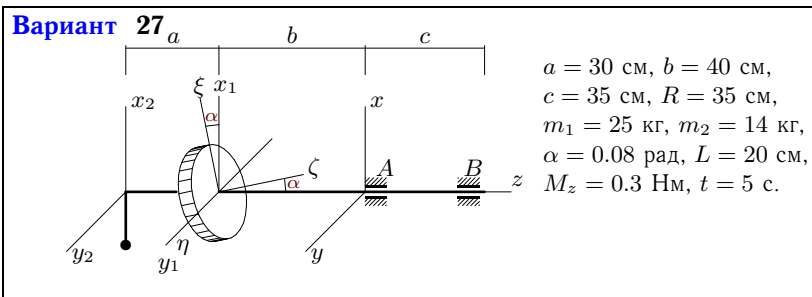
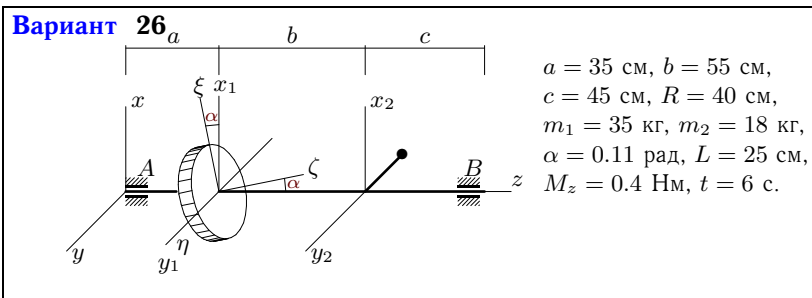
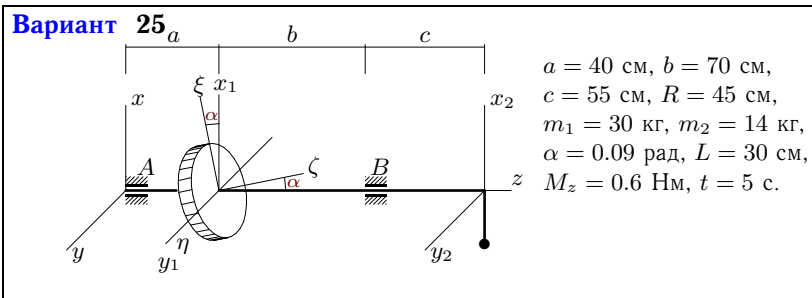
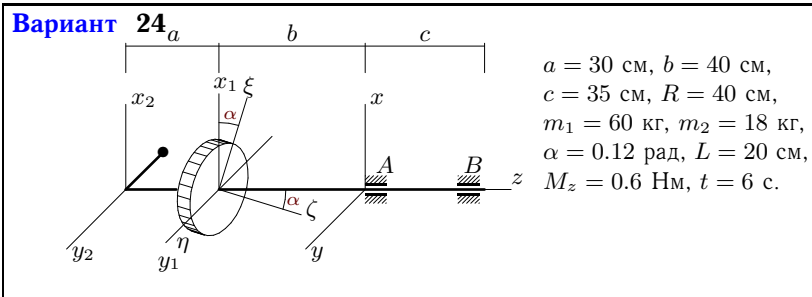
**Вариант 5**

$a = 40 \text{ см}, b = 70 \text{ см},$   
 $c = 55 \text{ см}, R = 45 \text{ см},$   
 $m_1 = 65 \text{ кг}, m_2 = 14 \text{ кг},$   
 $\alpha = 0.16 \text{ рад}, L = 30 \text{ см},$   
 $M_z = 1.8 \text{ Нм}, t = 5 \text{ с}.$

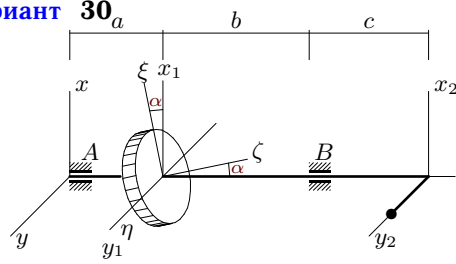








**Вариант 30**



$a = 40$  см,  $b = 70$  см,  
 $c = 55$  см,  $R = 45$  см,  
 $m_1 = 35$  кг,  $m_2 = 10$  кг,  
 $\alpha = 0.09$  рад,  $L = 30$  см,  
 $M_z = 1.1$  Нм,  $t = 4$  с.

Ответы

	$\varepsilon$	$\omega$	$x_c$	$y_c$	$z_c$	$X_A$	$Y_A$	$X_B$	$Y_B$
1	0.240	1.199	-4.038	0.000	-55.385	21.170	-3.531	-15.132	2.524
2	0.131	0.654	-7.119	0.000	69.661	-0.810	0.248	2.604	-0.797
3	0.318	1.272	0.000	4.706	58.235	0.364	-2.311	-1.636	-4.156
4	0.465	1.395	1.957	0.000	30.870	-0.734	0.175	-1.018	0.243
5	0.230	1.148	-5.316	0.000	62.152	-3.397	0.592	8.930	-1.556
6	0.595	1.785	3.182	0.000	-59.091	-23.181	4.329	16.490	-3.079
7	0.164	0.986	0.000	-5.833	-62.500	5.490	17.981	-4.454	-11.853
8	0.247	0.986	0.000	8.889	-71.111	-3.381	-11.569	2.394	7.677
9	0.175	0.877	-2.838	0.000	42.973	-0.614	0.140	2.229	-0.508
10	0.354	1.418	0.000	1.429	32.143	-0.200	1.071	-0.155	-3.081
11	0.139	0.693	-2.373	0.000	40.169	-0.280	0.081	0.953	-0.275
12	0.439	1.317	6.585	0.000	-73.049	-14.786	3.741	10.100	-2.556
13	0.298	1.193	0.000	3.125	-49.375	-0.724	-10.989	-0.022	7.432
14	0.296	1.185	0.000	4.375	61.875	1.262	2.301	-2.299	-7.218
15	0.256	1.026	0.000	2.143	38.571	0.434	0.730	-0.819	-2.308
16	0.357	1.430	0.000	2.632	47.105	1.767	2.325	-2.660	-7.437
17	0.232	1.160	-7.089	0.000	62.405	1.923	-0.332	5.609	-0.967
18	0.536	1.608	1.974	0.000	-47.763	-9.116	1.890	5.237	-1.086
19	0.376	1.502	0.000	3.750	-55.000	-6.224	-19.840	5.097	13.069
20	0.398	1.193	3.750	0.000	51.964	-0.768	0.215	-2.221	0.621
21	0.201	0.805	0.000	2.727	33.182	-0.041	-0.343	-0.261	-0.630
22	0.261	1.046	0.000	5.000	46.000	-0.347	-0.880	-0.306	-1.854
23	0.501	1.502	2.353	0.000	42.353	1.008	-0.224	-3.715	0.824
24	0.109	0.652	0.000	-4.615	-46.923	1.524	4.504	-1.133	-2.973
25	0.140	0.698	-9.545	0.000	79.773	-1.084	0.311	3.131	-0.897
26	0.102	0.611	0.000	-8.491	53.679	0.110	0.572	0.348	1.110
27	0.143	0.717	-7.179	0.000	-50.769	4.232	-1.180	-2.791	0.778
28	0.302	1.208	0.000	5.000	50.000	-0.597	-1.397	-0.308	-2.977
29	0.203	1.017	-6.292	0.000	-67.865	19.135	-3.765	-13.348	2.626
30	0.248	0.990	0.000	6.667	67.778	0.229	1.506	-0.972	-4.448