

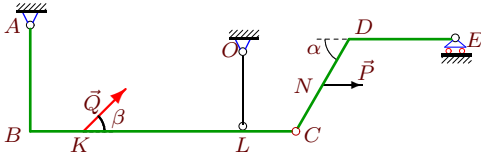
Составная конструкция

Определить реакции опор конструкции (в кН), состоящей из двух тел.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.- М.:ФИЗМАТЛИТ, 2002.- 384 с. (с.67.)

Задача 7.1.

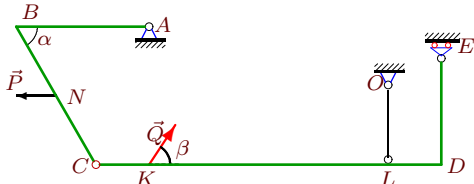
5



$P = 6$ кН, $Q = 9$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 4$ м, $BC = 10$ м, $CD = 4$ м,
 $DE = 4$ м, $CN = 2$ м, $BK = 2$ м. $LC = 2$ м.

Задача 7.3.

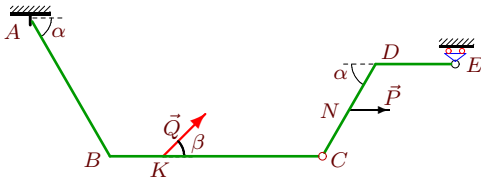
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$P = 7$ кН, $Q = 2$ кН, $\alpha = 60^\circ$, $\beta = 60^\circ$,
 $AB = 5$ м, $BC = 6$ м, $CD = 13$ м,
 $DE = 4$ м, $CN = 3$ м, $CK = 2$ м. $LD = 2$ м

Задача 7.5.

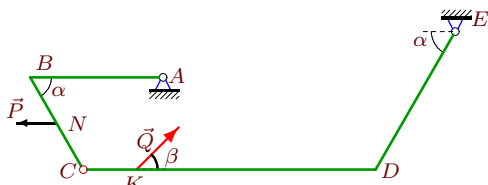
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$P = 7$ кН, $Q = 5$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 6$ м, $BC = 8$ м, $CD = 4$ м,
 $DE = 3$ м, $CN = 2$ м, $BK = 2$ м.

Задача 7.7.

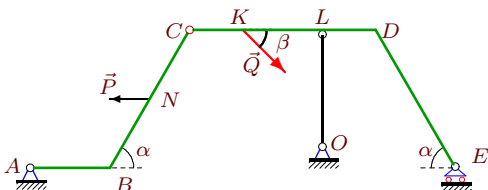
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$P = 5$ кН, $Q = 5$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 5$ м, $BC = 4$ м, $CD = 11$ м,
 $DE = 6$ м, $CN = 2$ м, $CK = 2$ м.

Задача 7.9.

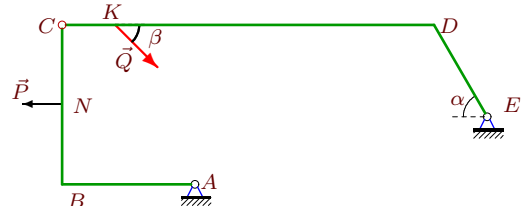
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$P = 5$ кН, $Q = 5$ кН, $\alpha = 60^\circ$, $\beta = 30^\circ$,
 $AB = 3$ м, $BC = 6$ м, $CD = 7$ м,
 $DE = 6$ м, $CN = 3$ м, $CK = 2$ м. $LD = 2$ м

Задача 7.2.

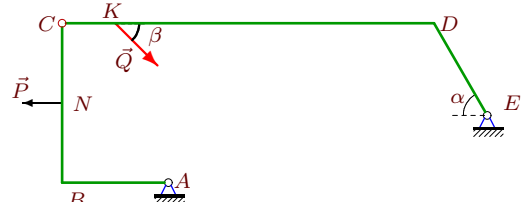
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$P = 4$ кН, $Q = 7$ кН, $\alpha = 60^\circ$, $\beta = 30^\circ$,
 $AB = 5$ м, $BC = 6$ м, $CD = 14$ м,
 $DE = 4$ м, $CN = 3$ м, $CK = 2$ м.

Задача 7.4.

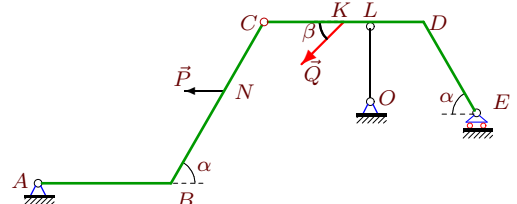
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$P = 5$ кН, $Q = 6$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 4$ м, $BC = 6$ м, $CD = 14$ м,
 $DE = 4$ м, $CN = 3$ м, $CK = 2$ м.

Задача 7.6.

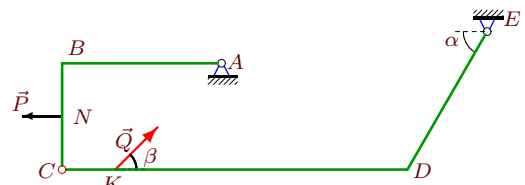
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$P = 6$ кН, $Q = 4$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 5$ м, $BC = 7$ м, $CD = 6$ м,
 $DE = 4$ м, $CN = 3$ м, $CK = 3$ м. $LD = 2$ м

Задача 7.8.

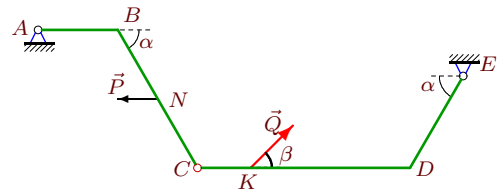
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$P = 5$ кН, $Q = 8$ кН, $\alpha = 60^\circ$, $\beta = 45^\circ$,
 $AB = 6$ м, $BC = 4$ м, $CD = 13$ м,
 $DE = 6$ м, $CN = 2$ м, $CK = 2$ м.

Задача 7.10.

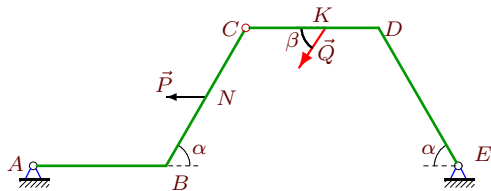
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$P = 4$ кН, $Q = 5$ кН, $\alpha = 60^\circ$, $\beta = 30^\circ$,
 $AB = 3$ м, $BC = 6$ м, $CD = 8$ м,
 $DE = 4$ м, $CN = 3$ м, $CK = 2$ м.

Задача 7.11.

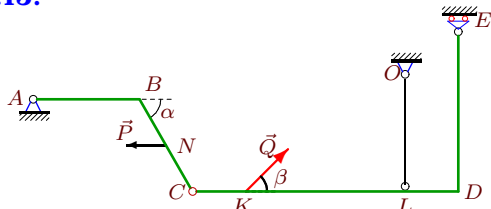
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$P = 7 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 5 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, CK = 3 \text{ м}.$

Задача 7.13.

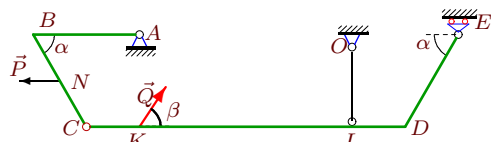
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$P = 5 \text{ кН}, Q = 2 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 4 \text{ м}, CD = 10 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}, LD = 2 \text{ м}.$

Задача 7.15.

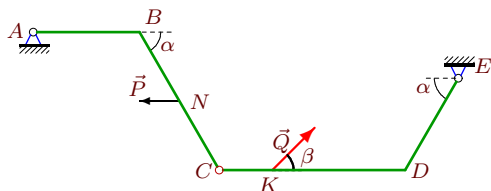
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$P = 8 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 4 \text{ м}, BC = 4 \text{ м}, CD = 12 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}, LD = 2 \text{ м}.$

Задача 7.17.

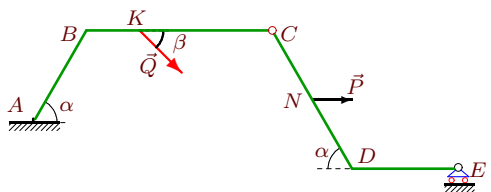
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$P = 5 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 6 \text{ м}, CD = 7 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.19.

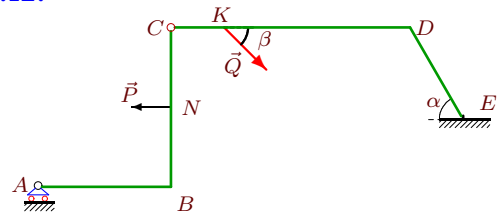
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$P = 6 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 4 \text{ м}, BC = 7 \text{ м}, CD = 6 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, BK = 2 \text{ м}.$

Задача 7.12.

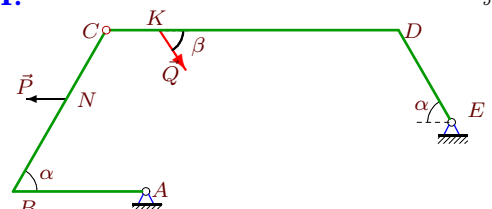
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$P = 7 \text{ кН}, Q = 6 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 9 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.14.

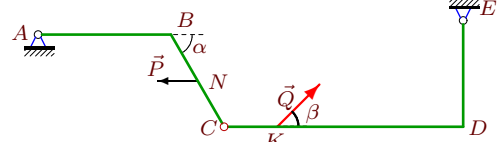
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$P = 7 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 5 \text{ м}, BC = 7 \text{ м}, CD = 11 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.16.

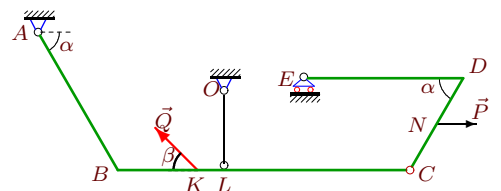
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$P = 5 \text{ кН}, Q = 2 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 5 \text{ м}, BC = 4 \text{ м}, CD = 9 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}.$

Задача 7.18.

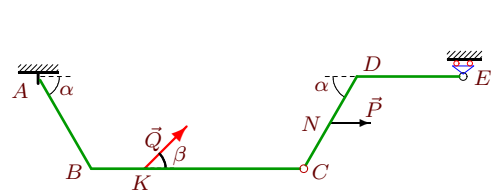
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$P = 6 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 6 \text{ м}, BC = 11 \text{ м}, CD = 4 \text{ м},$
 $DE = 6 \text{ м}, CN = 2 \text{ м}, BK = 3 \text{ м}, LC = 7 \text{ м}.$

Задача 7.20.

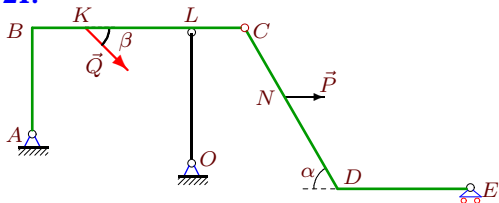
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$P = 7 \text{ кН}, Q = 5 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 8 \text{ м}, CD = 4 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}.$

Задача 7.21.

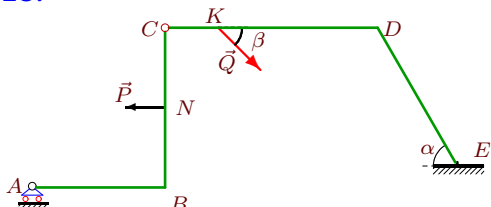
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$P = 6 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 8 \text{ м}, CD = 7 \text{ м},$
 $DE = 5 \text{ м}, CN = 3 \text{ м}, BK = 2 \text{ м}. LC = 2 \text{ м}.$

Задача 7.23.

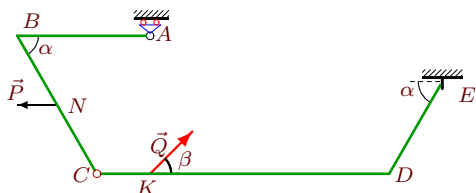
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$P = 6 \text{ кН}, Q = 9 \text{ кН}, \alpha = 60^\circ, \beta = 30^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 8 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.25.

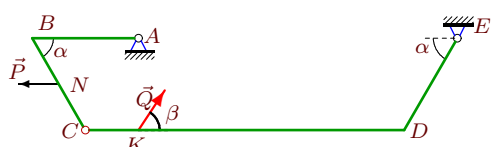
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$P = 7 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 11 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.27.

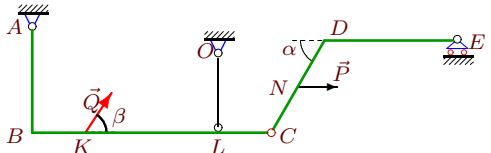
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$P = 6 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 4 \text{ м}, BC = 4 \text{ м}, CD = 12 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, CK = 2 \text{ м}.$

Задача 7.29.

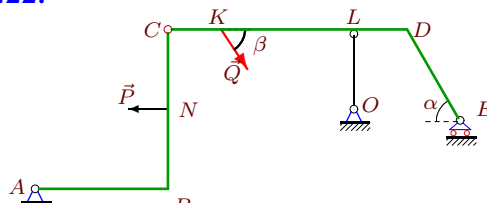
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$P = 7 \text{ кН}, Q = 8 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 4 \text{ м}, BC = 9 \text{ м}, CD = 4 \text{ м},$
 $DE = 5 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}. LC = 2 \text{ м}.$

Задача 7.22.

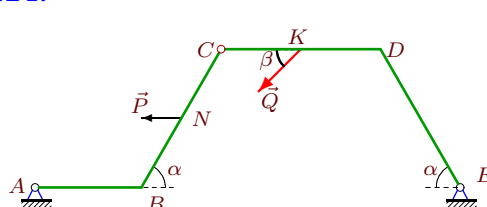
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$P = 8 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 75^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 9 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}. LD = 2 \text{ м}$

Задача 7.24.

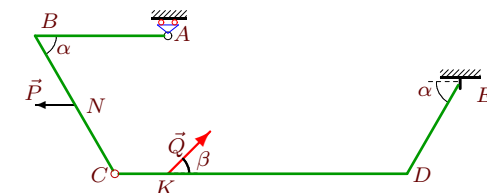
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$P = 5 \text{ кН}, Q = 4 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 4 \text{ м}, BC = 6 \text{ м}, CD = 6 \text{ м},$
 $DE = 6 \text{ м}, CN = 3 \text{ м}, CK = 3 \text{ м}.$

Задача 7.26.

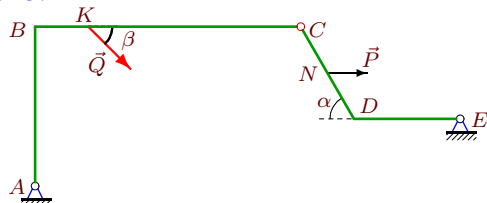
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$P = 7 \text{ кН}, Q = 3 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 5 \text{ м}, BC = 6 \text{ м}, CD = 11 \text{ м},$
 $DE = 4 \text{ м}, CN = 3 \text{ м}, CK = 2 \text{ м}.$

Задача 7.28.

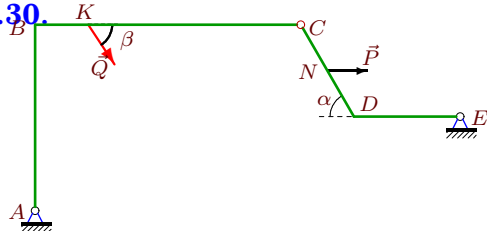
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$P = 5 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 45^\circ,$
 $AB = 6 \text{ м}, BC = 10 \text{ м}, CD = 4 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}.$

Задача 7.30.

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$P = 6 \text{ кН}, Q = 7 \text{ кН}, \alpha = 60^\circ, \beta = 60^\circ,$
 $AB = 7 \text{ м}, BC = 10 \text{ м}, CD = 4 \text{ м},$
 $DE = 4 \text{ м}, CN = 2 \text{ м}, BK = 2 \text{ м}.$

Составная конструкция

	X_A	Y_A	X_E	Y_E	S_{OL}	M	X_C	Y_C
1	-12.364	1.842	—	1.732	-9.938		6.000	1.732
2	-0.220	2.664	-1.843	0.836	—		4.220	-2.664
3	6.000	6.495	—	43.518	-51.745		1.000	-6.495
4	-0.098	3.898	0.856	0.345	—		5.098	-3.898
5	-10.536	-5.960	—	2.425	—	-99.095	7.000	2.425
6	8.828	4.462	—	3.755	-5.389		-2.828	-4.462
7	-0.877	-3.900	2.342	0.364	—		5.877	3.900
8	-8.978	-7.652	8.321	1.995	—		13.978	7.652
9	0.670	-1.585	—	-3.085	7.170		4.330	1.585
10	2.984	-0.852	-3.314	-1.648	—		1.016	0.852
11	7.032	2.294	0.744	0.603	—		-0.032	-2.294
12	—	-4.200	2.757	8.443	—	-93.936	7.000	4.200
13	3.268	-0.443	—	1.226	-1.783		1.732	0.443
14	1.726	5.147	3.979	-0.317	—		5.274	-5.147
15	6.965	5.135	—	20.565	-29.564		1.035	-5.135
16	4.185	-0.834	-0.599	-0.580	—		0.815	0.834
17	4.586	-1.548	-3.121	-1.987	—		0.414	1.548
18	-3.172	-0.648	—	-2.598	0.418		6.000	-2.598
19	-10.330	4.727	—	-2.227	—	65.827	6.000	-2.227
20	-10.536	-5.556	—	2.021	—	-70.846	7.000	2.021
21	-10.950	-4.611	—	-1.834	11.395		6.000	-1.834
22	6.188	2.626	—	-3.856	7.992		1.812	-2.626
23	—	-3.600	-1.794	8.100	—	-70.777	6.000	3.600
24	6.260	2.791	1.568	0.037	—		-1.260	-2.791
25	—	-9.093	4.172	6.265	—	-72.649	7.000	9.093
26	—	-9.093	4.879	6.972	—	-77.978	7.000	9.093
27	1.250	-3.031	3.250	0.433	—		4.750	3.031
28	-2.812	2.272	-7.137	2.677	—		-2.137	2.677
29	-11.000	1.832	—	1.732	-10.492		7.000	1.732
30	-1.989	3.458	-7.511	2.605	—		-1.511	2.605