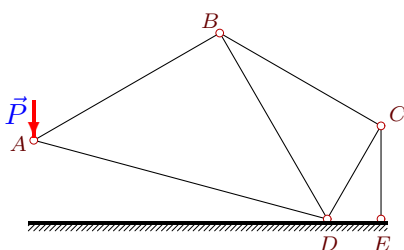


# Плоская конструкция из 6 стержней

Кирсанов М.Н. **Решebник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. – 384 с. (с.14.)

## Задача S1.1.

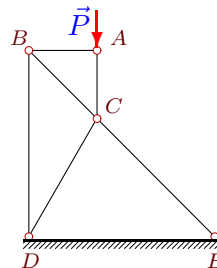
*Батракова Анна*



$P=5$  кН,  
 $\angle ABD=90^\circ$ ,  
 $\angle ADB=45^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=90^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=90^\circ$ .

## Задача S1.2.

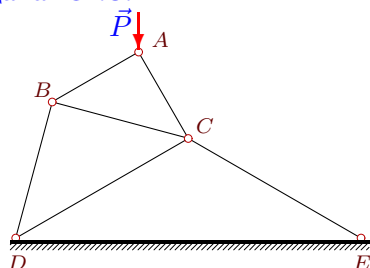
*Доржу Херел Сергеевич*



$P=33$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=105^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=45^\circ$ .

## Задача S1.3.

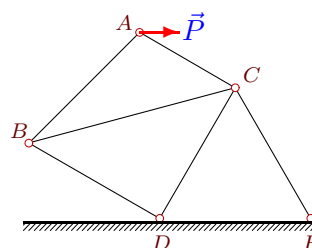
*Коротеев Кирилл*



$P=3$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
 $\angle BDC=45^\circ$ ,  
 $\angle BCD=45^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=30^\circ$ .

## Задача S1.4.

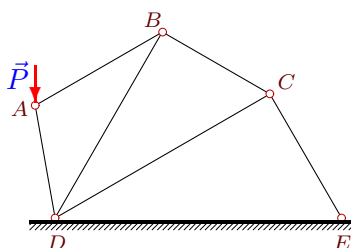
*Ондар Артыш*



$P=23$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=30^\circ$ ,  
 $\angle BDC=90^\circ$ ,  
 $\angle BCD=45^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=60^\circ$ .

## Задача S1.5.

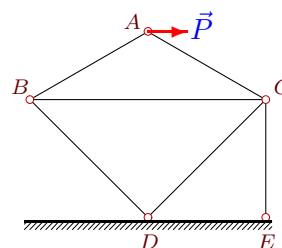
*Посохов Андрей*



$P=33$  кН,  
 $\angle ABD=30^\circ$ ,  
 $\angle ADB=40^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=60^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=60^\circ$ .

## Задача S1.6.

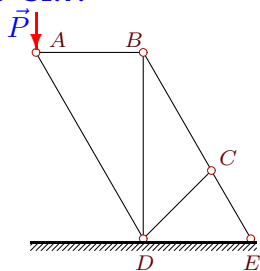
*Сидоренко Екатерина*



$P=21$  кН,  
 $\angle ACB=30^\circ$ ,  
 $\angle ABC=30^\circ$ ,  
 $\angle BDC=90^\circ$ ,  
 $\angle BCD=45^\circ$ ,  
 $\angle CDE=45^\circ$ ,  
 $\angle CED=90^\circ$ .

## Задача S1.7.

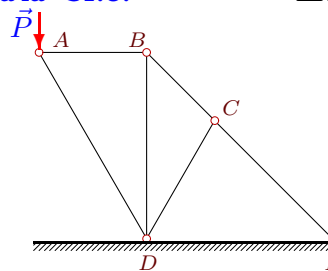
*Чалый Дмитрий*



$P=4$  кН,  
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 $\angle BDC=45^\circ$ ,  
 $\angle BCD=105^\circ$ ,  
 $\angle CDE=45^\circ$ ,  
 $\angle CED=60^\circ$ .

## Задача S1.8.

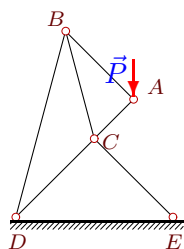
*Шайхлисламов Ильдар*



$P=32$  кН,  
 $\angle ABD=90^\circ$ ,  
 $\angle ADB=30^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=105^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=45^\circ$ .

## Задача S1.9.

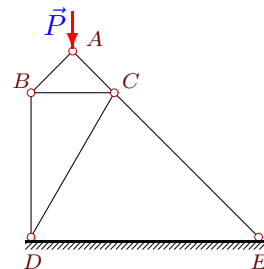
*Николаева Кристина*



$P=6$  кН,  
 $\angle ACB=60^\circ$ ,  
 $\angle ABC=30^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=120^\circ$ ,  
 $\angle CDE=45^\circ$ ,  
 $\angle CED=45^\circ$ .

## Задача S1.10.

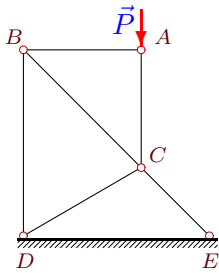
*Трапезников Кирилл*



$P=18$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=60^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=45^\circ$ .

**Задача S1.11.**

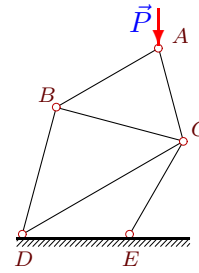
Гайдукова Мария



$P=24$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=75^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=45^\circ$ .

**Задача S1.12.**

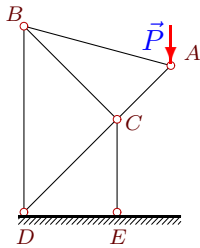
Климова Елена



$P=19$  кН,  
 $\angle ACB=60^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
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 $\angle BCD=45^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=120^\circ$ .

**Задача S1.13.**

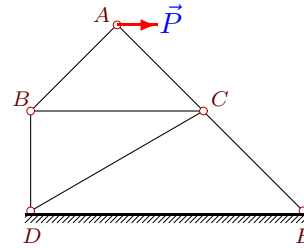
Дрозд Анастасия



$P=9$  кН,  
 $\angle ACB=90^\circ$ ,  
 $\angle ABC=30^\circ$ ,  
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 $\angle BCD=90^\circ$ ,  
 $\angle CDE=45^\circ$ ,  
 $\angle CED=90^\circ$ .

**Задача S1.14.**

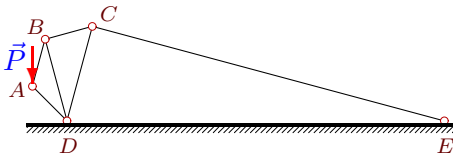
Аксенов Михаил



$P=13$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
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 $\angle BCD=30^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=45^\circ$ .

**Задача S1.15.**

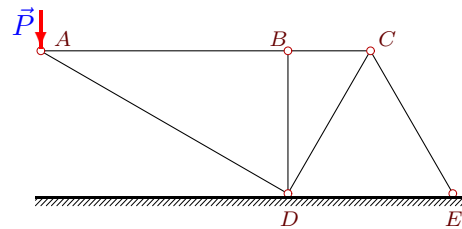
Завьялов Борис



$P=12$  кН,  
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 $\angle ADB=30^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=60^\circ$ ,  
 $\angle CDE=75^\circ$ ,  
 $\angle CED=15^\circ$ .

**Задача S1.16.**

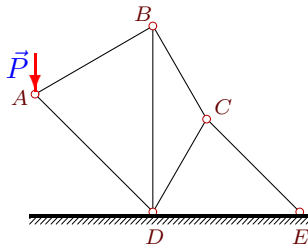
Демидова Светлана



$P=31$  кН,  
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 $\angle ADB=60^\circ$ ,  
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 $\angle BCD=60^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=60^\circ$ .

**Задача S1.17.**

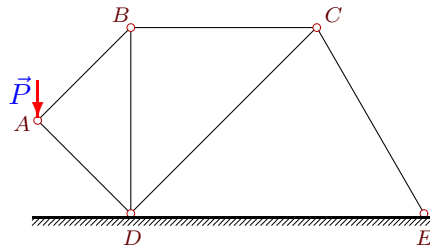
Лаптева Юлия



$P=30$  кН,  
 $\angle ABD=60^\circ$ ,  
 $\angle ADB=45^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=120^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=45^\circ$ .

**Задача S1.18.**

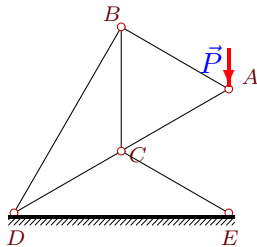
Демиденко Кирилл



$P=14$  кН,  
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 $\angle ADB=45^\circ$ ,  
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 $\angle CDE=45^\circ$ ,  
 $\angle CED=60^\circ$ .

**Задача S1.19.**

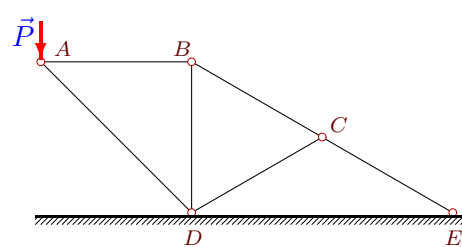
БАРАШКОВ Александр



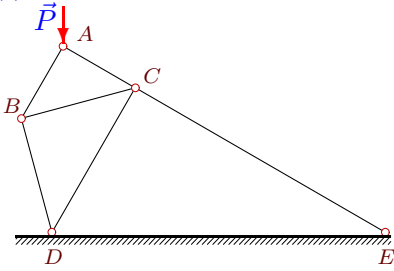
$P=33$  кН,  
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 $\angle ABC=60^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=120^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.20.**

Никулин

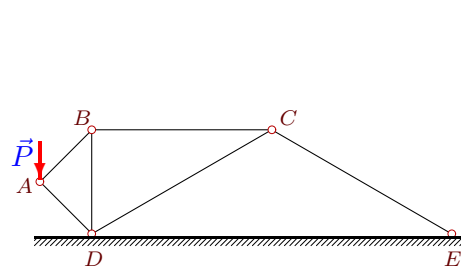


$P=31$  кН,  
 $\angle ABD=90^\circ$ ,  
 $\angle ADB=45^\circ$ ,  
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 $\angle BCD=60^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.21.**

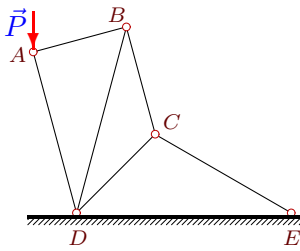
Моисеенко

$P=22$  кН,  
 $\angle ACB=45^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
 $\angle BDC=45^\circ$ ,  
 $\angle BCD=45^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.22.**

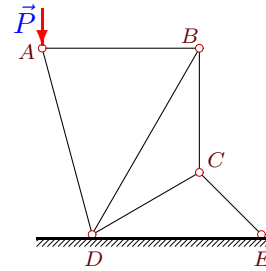
Белозерова

$P=33$  кН,  
 $\angle ABD=45^\circ$ ,  
 $\angle ADB=45^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=30^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.23.**

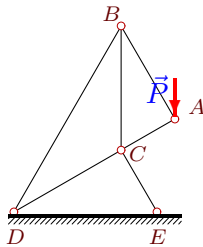
Можегов

$P=4$  кН,  
 $\angle ABD=60^\circ$ ,  
 $\angle ADB=30^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=120^\circ$ ,  
 $\angle CDE=45^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.24.**

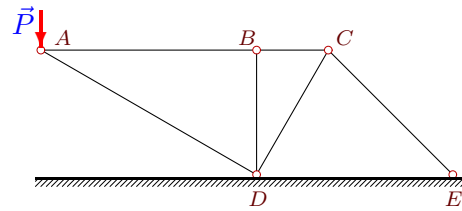
Бельчук

$P=4$  кН,  
 $\angle ABD=60^\circ$ ,  
 $\angle ADB=45^\circ$ ,  
 $\angle BDC=30^\circ$ ,  
 $\angle BCD=120^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=45^\circ$ .

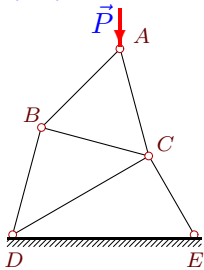
**Задача S1.25.**

Мильчакова Мария

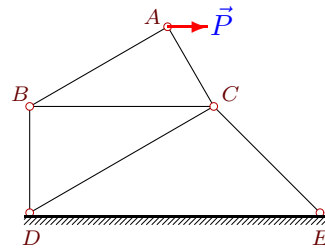
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 $\angle CDE=30^\circ$ ,  
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**Задача S1.26.**

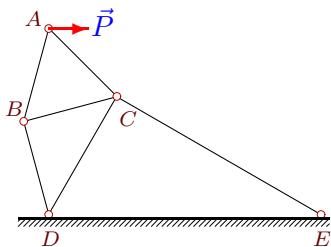
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 $\angle CDE=60^\circ$ ,  
 $\angle CED=45^\circ$ .

**Задача S1.27.**

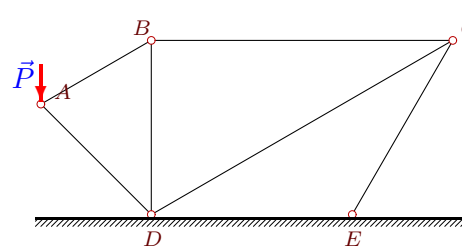
$P=3$  кН,  
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 $\angle ABC=60^\circ$ ,  
 $\angle BDC=45^\circ$ ,  
 $\angle BCD=45^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=60^\circ$ .

**Задача S1.28.**

$P=5$  кН,  
 $\angle ACB=60^\circ$ ,  
 $\angle ABC=30^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=30^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=45^\circ$ .

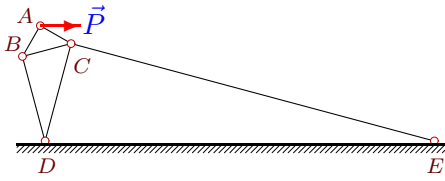
**Задача S1.29.**

$P=26$  кН,  
 $\angle ACB=60^\circ$ ,  
 $\angle ABC=60^\circ$ ,  
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 $\angle CDE=60^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.30.**

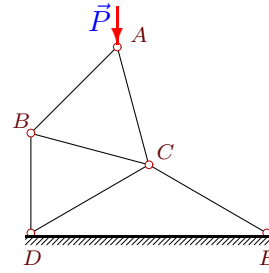
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 $\angle ADB=45^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=30^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=120^\circ$ .

**Задача S1.31.**



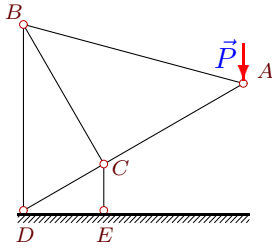
$P=33$  кН,  
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 $\angle CDE=75^\circ$ ,  
 $\angle CED=15^\circ$ .

**Задача S1.32.**



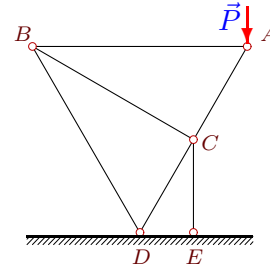
$P=33$  кН,  
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 $\angle BDC=60^\circ$ ,  
 $\angle BCD=45^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=30^\circ$ .

**Задача S1.33.**



$P=20$  кН,  
 $\angle ACB=90^\circ$ ,  
 $\angle ABC=45^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=90^\circ$ ,  
 $\angle CDE=30^\circ$ ,  
 $\angle CED=90^\circ$ .

**Задача S1.34.**



$P=10$  кН,  
 $\angle ACB=90^\circ$ ,  
 $\angle ABC=30^\circ$ ,  
 $\angle BDC=60^\circ$ ,  
 $\angle BCD=90^\circ$ ,  
 $\angle CDE=60^\circ$ ,  
 $\angle CED=90^\circ$ .

**S1 Ответы.**  
**Плоская конструкция из 6 стержней**

28.09.2011

	$S_{AB}$	$S_{AC}$	$S_{AD}$	$S_{BC}$	$S_{BD}$	$S_{CD}$	$S_{CE}$	
1	6.830	—	-6.124	13.660	-11.830	-23.660	27.321	Батракова Анна
2	-0.000	-33.000	—	0.000	-0.000	-24.158	-17.082	Доржу Херел Сергеевич
3	-1.500	-2.598	—	1.061	-1.061	-1.817	-2.134	Коротеев Кирилл
4	11.906	-16.837	—	-16.263	8.419	27.860	-32.721	Ондар Артыш
5	6.098	—	-30.413	3.049	-5.281	-1.525	2.641	Посохов Андрей
6	12.124	-12.124	—	-16.562	8.573	38.272	-33.124	Сидоренко Екатерина
7	2.309	—	-4.619	4.619	-4.000	-0.000	4.619	Чалый Дмитрий
8	18.475	—	-36.950	26.128	-18.475	-0.000	26.128	Шайхлисламов Ильдар
9	4.243	-4.243	—	-7.348	4.243	-7.917	-6.364	Николаева Кристина
10	-12.728	-12.728	—	9.000	-9.000	-6.588	-4.659	Трапезников Кирилл
11	0.000	-24.000	—	-0.000	0.000	-17.569	-21.518	Гайдукова Мария
12	-5.091	-17.035	—	3.600	-3.600	17.137	-27.818	Климова Елена
13	7.348	-10.038	—	-10.038	5.196	-0.000	-14.196	Дрозд Анастасия
14	9.192	-9.192	—	-6.500	6.500	4.758	-12.557	Аксенов Михаил
15	9.798	—	-3.586	4.899	-8.485	-2.449	4.243	Завьялов Борис
16	53.694	—	-62.000	53.694	-0.000	-53.694	53.694	Демидова Светлана
17	21.962	—	-26.897	38.038	-43.923	10.192	34.104	Лаптева Юлия
18	9.899	—	-9.899	7.000	-7.000	-6.276	5.124	Демиденко Кирилл
19	33.000	-33.000	—	-66.000	57.158	-99.000	-66.000	БАРАШКОВ Александр
20	31.000	—	-43.841	35.796	-17.898	-0.000	35.796	Никулин
21	-19.053	-11.000	—	13.472	-13.472	-9.526	-1.474	Моисеенко
22	23.335	—	-23.335	16.500	-16.500	-9.526	9.526	Белозерова
23	1.035	—	-3.864	1.793	-2.071	1.313	1.608	Можегов
24	1.072	—	-4.141	1.856	-2.144	1.359	1.664	Бельчук
25	5.196	-3.000	—	-9.000	5.196	-7.500	-7.794	Мильчакова Мария
26	5.196	—	-6.000	5.196	-0.000	-3.804	4.659	
27	-0.897	-2.449	—	0.448	-0.776	-0.951	-2.049	
28	4.330	-2.500	—	-3.750	2.165	2.075	-4.529	
29	21.229	-28.999	—	-10.614	18.385	-0.000	-35.517	
30	4.392	—	-5.379	3.804	-2.196	-6.588	3.804	
31	16.500	-28.579	—	-11.667	11.667	-1.563	-37.709	
32	-9.862	-26.944	—	7.220	-8.842	-24.158	-24.158	
33	24.495	-27.321	—	-47.321	34.641	0.000	-54.641	
34	5.774	-11.547	—	-10.000	5.774	5.774	-20.000	

S1 файл oldsB