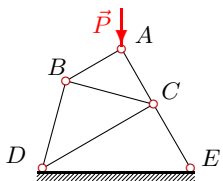
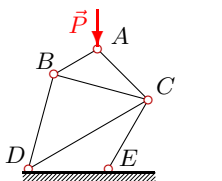
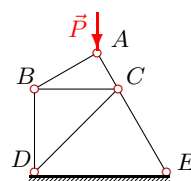
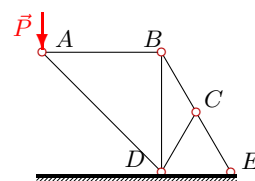
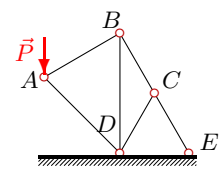
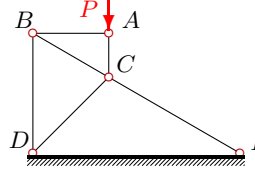
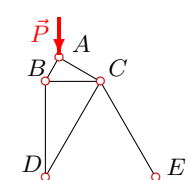
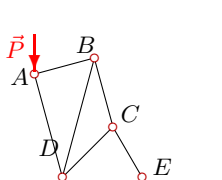
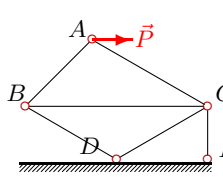
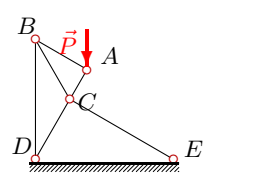
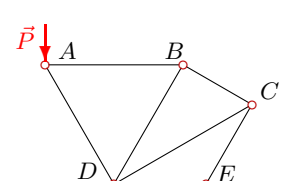
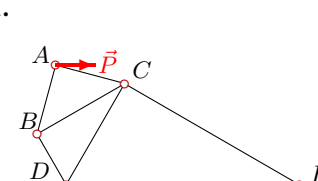


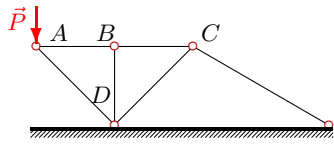
## Простая стержневая система.

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<p><b>Вариант 1</b> С1.</p>  <p style="text-align: right;"> <math>P = 1 \text{ кН},</math>  <math>\angle ACB = 45^\circ,</math>  <math>\angle ABC = 45^\circ,</math>  <math>\angle BDC = 45^\circ,</math>  <math>\angle BCD = 45^\circ,</math>  <math>\angle CDE = 30^\circ,</math>  <math>\angle CED = 60^\circ.</math> </p>	<p><b>Вариант 2</b> С1.</p>  <p style="text-align: right;"> <math>P = 2 \text{ кН},</math>  <math>\angle ACB = 30^\circ,</math>  <math>\angle ABC = 45^\circ,</math>  <math>\angle BDC = 45^\circ,</math>  <math>\angle BCD = 45^\circ,</math>  <math>\angle CDE = 30^\circ,</math>  <math>\angle CED = 120^\circ.</math> </p>
<p><b>Вариант 3</b> С1.</p>  <p style="text-align: right;"> <math>P = 3 \text{ кН},</math>  <math>\angle ACB = 60^\circ,</math>  <math>\angle ABC = 30^\circ,</math>  <math>\angle BDC = 45^\circ,</math>  <math>\angle BCD = 45^\circ,</math>  <math>\angle CDE = 45^\circ,</math>  <math>\angle CED = 60^\circ.</math> </p>	<p><b>Вариант 4</b> С1.</p>  <p style="text-align: right;"> <math>P = 4 \text{ кН},</math>  <math>\angle ABD = 90^\circ,</math>  <math>\angle ADB = 45^\circ,</math>  <math>\angle BDC = 30^\circ,</math>  <math>\angle BCD = 120^\circ,</math>  <math>\angle CDE = 60^\circ,</math>  <math>\angle CED = 60^\circ.</math> </p>
<p><b>Вариант 5</b> С1.</p>  <p style="text-align: right;"> <math>P = 5 \text{ кН},</math>  <math>\angle ABD = 60^\circ,</math>  <math>\angle ADB = 45^\circ,</math>  <math>\angle BDC = 30^\circ,</math>  <math>\angle BCD = 120^\circ,</math>  <math>\angle CDE = 60^\circ,</math>  <math>\angle CED = 60^\circ.</math> </p>	<p><b>Вариант 6</b> С1.</p>  <p style="text-align: right;"> <math>P = 6 \text{ кН},</math>  <math>\angle ACB = 60^\circ,</math>  <math>\angle ABC = 30^\circ,</math>  <math>\angle BDC = 45^\circ,</math>  <math>\angle BCD = 75^\circ,</math>  <math>\angle CDE = 45^\circ,</math>  <math>\angle CED = 30^\circ.</math> </p>
<p><b>Вариант 7</b> С1.</p>  <p style="text-align: right;"> <math>P = 7 \text{ кН},</math>  <math>\angle ACB = 30^\circ,</math>  <math>\angle ABC = 60^\circ,</math>  <math>\angle BDC = 30^\circ,</math>  <math>\angle BCD = 60^\circ,</math>  <math>\angle CDE = 60^\circ,</math>  <math>\angle CED = 60^\circ.</math> </p>	<p><b>Вариант 8</b> С1.</p>  <p style="text-align: right;"> <math>P = 8 \text{ кН},</math>  <math>\angle ABD = 60^\circ,</math>  <math>\angle ADB = 30^\circ,</math>  <math>\angle BDC = 30^\circ,</math>  <math>\angle BCD = 120^\circ,</math>  <math>\angle CDE = 45^\circ,</math>  <math>\angle CED = 60^\circ.</math> </p>
<p><b>Вариант 9</b> С1.</p>  <p style="text-align: right;"> <math>P = 9 \text{ кН},</math>  <math>\angle ACB = 30^\circ,</math>  <math>\angle ABC = 45^\circ,</math>  <math>\angle BDC = 120^\circ,</math>  <math>\angle BCD = 30^\circ,</math>  <math>\angle CDE = 30^\circ,</math>  <math>\angle CED = 90^\circ.</math> </p>	<p><b>Вариант 10</b> С1.</p>  <p style="text-align: right;"> <math>P = 10 \text{ кН},</math>  <math>\angle ACB = 60^\circ,</math>  <math>\angle ABC = 30^\circ,</math>  <math>\angle BDC = 30^\circ,</math>  <math>\angle BCD = 120^\circ,</math>  <math>\angle CDE = 60^\circ,</math>  <math>\angle CED = 30^\circ.</math> </p>
<p><b>Вариант 11</b> С1.</p>  <p style="text-align: right;"> <math>P = 11 \text{ кН},</math>  <math>\angle ABD = 60^\circ,</math>  <math>\angle ADB = 60^\circ,</math>  <math>\angle BDC = 30^\circ,</math>  <math>\angle BCD = 60^\circ,</math>  <math>\angle CDE = 30^\circ,</math>  <math>\angle CED = 120^\circ.</math> </p>	<p><b>Вариант 12</b> С1.</p>  <p style="text-align: right;"> <math>P = 12 \text{ кН},</math>  <math>\angle ACB = 45^\circ,</math>  <math>\angle ABC = 45^\circ,</math>  <math>\angle BDC = 60^\circ,</math>  <math>\angle BCD = 30^\circ,</math>  <math>\angle CDE = 60^\circ,</math>  <math>\angle CED = 30^\circ.</math> </p>

**Вариант 13**

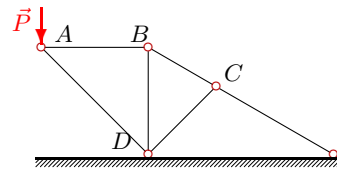
C1.



$P = 13 \text{ кН}$ ,  
 $\angle ABD = 90^\circ$ ,  
 $\angle ADB = 45^\circ$ ,  
 $\angle BDC = 45^\circ$ ,  
 $\angle BCD = 45^\circ$ ,  
 $\angle CDE = 45^\circ$ ,  
 $\angle CED = 30^\circ$ .

**Вариант 14**

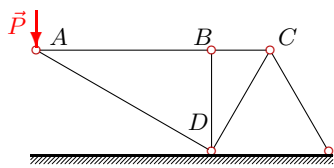
C1.



$P = 14 \text{ кН}$ ,  
 $\angle ABD = 90^\circ$ ,  
 $\angle ADB = 45^\circ$ ,  
 $\angle BDC = 45^\circ$ ,  
 $\angle BCD = 75^\circ$ ,  
 $\angle CDE = 45^\circ$ ,  
 $\angle CED = 30^\circ$ .

**Вариант 15**

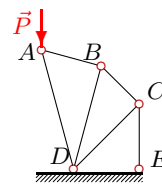
C1.



$P = 15 \text{ кН}$ ,  
 $\angle ABD = 90^\circ$ ,  
 $\angle ADB = 60^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 60^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 16**

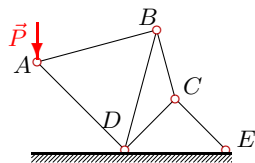
C1.



$P = 16 \text{ кН}$ ,  
 $\angle ABD = 90^\circ$ ,  
 $\angle ADB = 30^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 90^\circ$ ,  
 $\angle CDE = 45^\circ$ ,  
 $\angle CED = 90^\circ$ .

**Вариант 17**

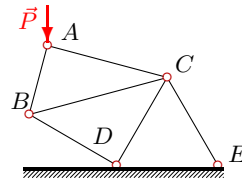
C1.



$P = 17 \text{ кН}$ ,  
 $\angle ABD = 60^\circ$ ,  
 $\angle ADB = 60^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 120^\circ$ ,  
 $\angle CDE = 45^\circ$ ,  
 $\angle CED = 45^\circ$ .

**Вариант 18**

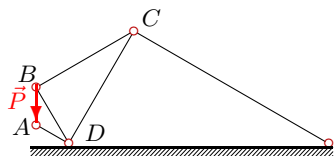
C1.



$P = 18 \text{ кН}$ ,  
 $\angle ACB = 30^\circ$ ,  
 $\angle ABC = 60^\circ$ ,  
 $\angle BDC = 90^\circ$ ,  
 $\angle BCD = 45^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 19**

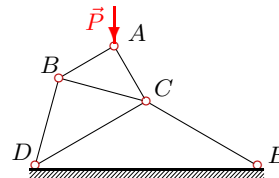
C1.



$P = 19 \text{ кН}$ ,  
 $\angle ABD = 30^\circ$ ,  
 $\angle ADB = 30^\circ$ ,  
 $\angle BDC = 60^\circ$ ,  
 $\angle BCD = 30^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 30^\circ$ .

**Вариант 20**

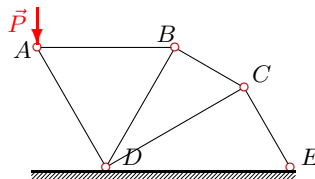
C1.



$P = 20 \text{ кН}$ ,  
 $\angle ACB = 45^\circ$ ,  
 $\angle ABC = 45^\circ$ ,  
 $\angle BDC = 45^\circ$ ,  
 $\angle BCD = 45^\circ$ ,  
 $\angle CDE = 30^\circ$ ,  
 $\angle CED = 30^\circ$ .

**Вариант 21**

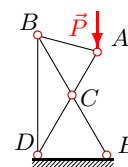
C1.



$P = 21 \text{ кН}$ ,  
 $\angle ABD = 60^\circ$ ,  
 $\angle ADB = 60^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 60^\circ$ ,  
 $\angle CDE = 30^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 22**

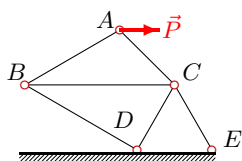
C1.



$P = 22 \text{ кН}$ ,  
 $\angle ACB = 60^\circ$ ,  
 $\angle ABC = 45^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 120^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 23**

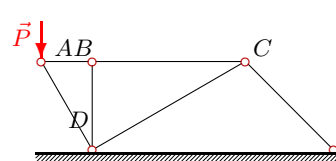
C1.



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

**Вариант 24**

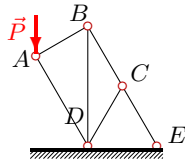
C1.



$P = 24 \text{ кН}$ ,  
 $\angle ABD = 90^\circ$ ,  
 $\angle ADB = 30^\circ$ ,  
 $\angle BDC = 60^\circ$ ,  
 $\angle BCD = 30^\circ$ ,  
 $\angle CDE = 30^\circ$ ,  
 $\angle CED = 45^\circ$ .

**Вариант 25**

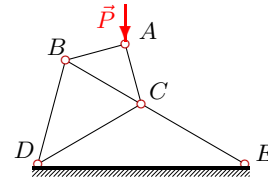
C1.



$P = 25 \text{ кН}$ ,  
 $\angle ABD = 60^\circ$ ,  
 $\angle ADB = 30^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 120^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 26**

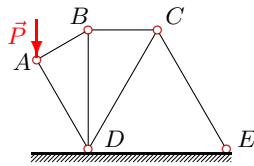
C1.



$P = 26 \text{ кН}$ ,  
 $\angle ACB = 45^\circ$ ,  
 $\angle ABC = 45^\circ$ ,  
 $\angle BDC = 45^\circ$ ,  
 $\angle BCD = 60^\circ$ ,  
 $\angle CDE = 30^\circ$ ,  
 $\angle CED = 30^\circ$ .

**Вариант 27**

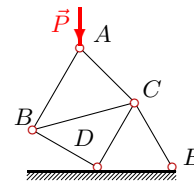
C1.



$P = 27 \text{ кН}$ ,  
 $\angle ABD = 60^\circ$ ,  
 $\angle ADB = 30^\circ$ ,  
 $\angle BDC = 30^\circ$ ,  
 $\angle BCD = 60^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 28**

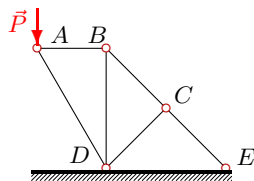
C1.



$P = 28 \text{ кН}$ ,  
 $\angle ACB = 60^\circ$ ,  
 $\angle ABC = 45^\circ$ ,  
 $\angle BDC = 90^\circ$ ,  
 $\angle BCD = 45^\circ$ ,  
 $\angle CDE = 60^\circ$ ,  
 $\angle CED = 60^\circ$ .

**Вариант 29**

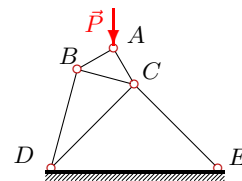
C1.



$P = 29 \text{ кН}$ ,  
 $\angle ABD = 90^\circ$ ,  
 $\angle ADB = 30^\circ$ ,  
 $\angle BDC = 45^\circ$ ,  
 $\angle BCD = 90^\circ$ ,  
 $\angle CDE = 45^\circ$ ,  
 $\angle CED = 45^\circ$ .

**Вариант 30**

C1.



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

Отвѣты

	$S_{AB}$	$S_{AC}$	$S_{AD}$	$S_{BC}$	$S_{BD}$	$S_{CD}$	$S_{CE}$
1	-0.500	-0.866	—	0.354	-0.354	-0.250	-0.616
2	-1.464	-1.793	—	1.035	-1.035	1.464	-2.000
3	-1.500	-2.598	—	1.299	-0.750	-1.165	-1.647
4	4.000	—	-5.657	8.000	-6.928	-0.000	8.000
5	3.660	—	-4.483	6.340	-7.321	0.000	6.340
6	0.000	-6.000	—	-0.000	0.000	-5.379	-4.392
7	-6.062	-3.500	—	3.031	-5.250	-1.010	-1.010
8	2.071	—	-7.727	3.586	-4.141	0.961	3.215
9	4.659	-6.588	—	-9.000	6.588	16.981	-11.785
10	5.000	-8.660	—	-8.660	5.000	-12.990	-7.500
11	6.351	—	-12.702	5.500	-3.175	-11.000	9.526
12	3.106	-11.591	—	-2.196	2.196	4.902	-12.294
13	13.000	—	-18.385	13.000	0.000	-6.729	9.517
14	14.000	—	-19.799	16.166	-8.083	0.000	16.166
15	25.981	—	-30.000	25.981	0.000	-25.981	25.981
16	4.782	—	-17.846	5.521	-2.761	-5.521	7.809
17	13.880	—	-18.961	24.042	-27.761	12.021	20.821
18	-17.387	-4.659	—	23.751	-21.294	-22.687	14.196
19	19.000	—	0.000	9.500	-16.454	-8.227	4.750
20	-10.000	-17.321	—	7.071	-7.071	-12.113	-14.226
21	12.124	—	-24.249	10.500	-6.062	-5.250	9.093
22	11.388	-22.000	—	-22.000	16.105	-22.000	-22.000
23	16.837	-11.906	—	-29.163	16.837	32.721	-42.442
24	13.856	—	-27.713	13.856	0.000	-10.144	7.173
25	12.500	—	-21.651	21.651	-25.000	0.000	21.651
26	-6.729	-25.114	—	6.033	-4.926	-20.506	-21.978
27	13.500	—	-23.383	11.691	-6.750	-11.691	11.691
28	-20.497	-14.494	—	28.988	-20.497	-28.000	7.503
29	16.743	—	-33.486	23.678	-16.743	0.000	23.678
30	-15.000	-25.981	—	10.607	-10.607	-12.028	-15.910