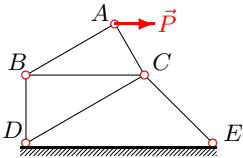
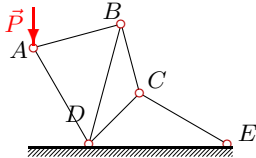
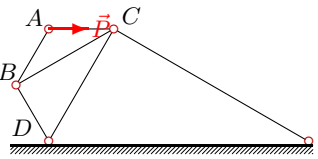
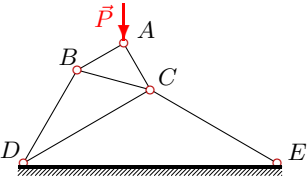
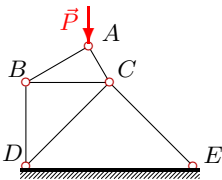
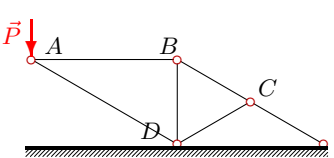
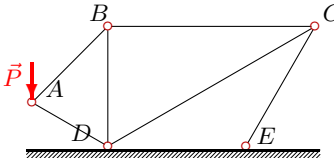
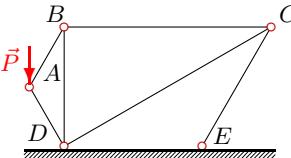
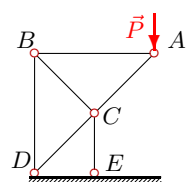
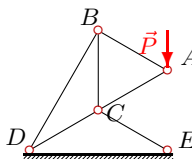
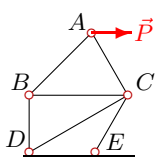
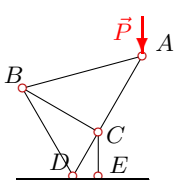


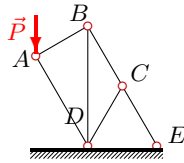
Простая стержневая система.

Кирсанов М.Н. **Решебник. Теоретическая механика** с. 14.

<p>Вариант 1 C1.</p>  <p style="text-align: right;"> $P = 1 \text{ кН},$ $\angle ACB = 60^\circ,$ $\angle ABC = 30^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 30^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 45^\circ.$ </p>	<p>Вариант 2 C1.</p>  <p style="text-align: right;"> $P = 2 \text{ кН},$ $\angle ABD = 60^\circ,$ $\angle ADB = 45^\circ,$ $\angle BDC = 30^\circ,$ $\angle BCD = 120^\circ,$ $\angle CDE = 45^\circ,$ $\angle CED = 30^\circ.$ </p>
<p>Вариант 3 C1.</p>  <p style="text-align: right;"> $P = 3 \text{ кН},$ $\angle ACB = 30^\circ,$ $\angle ABC = 30^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 30^\circ,$ $\angle CDE = 60^\circ,$ $\angle CED = 30^\circ.$ </p>	<p>Вариант 4 C1.</p>  <p style="text-align: right;"> $P = 4 \text{ кН},$ $\angle ACB = 45^\circ,$ $\angle ABC = 45^\circ,$ $\angle BDC = 30^\circ,$ $\angle BCD = 45^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 30^\circ.$ </p>
<p>Вариант 5 C1.</p>  <p style="text-align: right;"> $P = 5 \text{ кН},$ $\angle ACB = 60^\circ,$ $\angle ABC = 30^\circ,$ $\angle BDC = 45^\circ,$ $\angle BCD = 45^\circ,$ $\angle CDE = 45^\circ,$ $\angle CED = 45^\circ.$ </p>	<p>Вариант 6 C1.</p>  <p style="text-align: right;"> $P = 6 \text{ кН},$ $\angle ABD = 90^\circ,$ $\angle ADB = 60^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 60^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 30^\circ.$ </p>
<p>Вариант 7 C1.</p>  <p style="text-align: right;"> $P = 7 \text{ кН},$ $\angle ABD = 45^\circ,$ $\angle ADB = 60^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 30^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 120^\circ.$ </p>	<p>Вариант 8 C1.</p>  <p style="text-align: right;"> $P = 8 \text{ кН},$ $\angle ABD = 30^\circ,$ $\angle ADB = 30^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 30^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 120^\circ.$ </p>
<p>Вариант 9 C1.</p>  <p style="text-align: right;"> $P = 9 \text{ кН},$ $\angle ACB = 90^\circ,$ $\angle ABC = 45^\circ,$ $\angle BDC = 45^\circ,$ $\angle BCD = 90^\circ,$ $\angle CDE = 45^\circ,$ $\angle CED = 90^\circ.$ </p>	<p>Вариант 10 C1.</p>  <p style="text-align: right;"> $P = 10 \text{ кН},$ $\angle ACB = 60^\circ,$ $\angle ABC = 60^\circ,$ $\angle BDC = 30^\circ,$ $\angle BCD = 120^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 30^\circ.$ </p>
<p>Вариант 11 C1.</p>  <p style="text-align: right;"> $P = 11 \text{ кН},$ $\angle ACB = 60^\circ,$ $\angle ABC = 45^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 30^\circ,$ $\angle CDE = 30^\circ,$ $\angle CED = 120^\circ.$ </p>	<p>Вариант 12 C1.</p>  <p style="text-align: right;"> $P = 12 \text{ кН},$ $\angle ACB = 90^\circ,$ $\angle ABC = 45^\circ,$ $\angle BDC = 60^\circ,$ $\angle BCD = 90^\circ,$ $\angle CDE = 60^\circ,$ $\angle CED = 90^\circ.$ </p>

Вариант 13

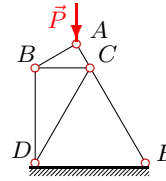
C1.



$P = 13 \text{ кН}$,
 $\angle ABD = 60^\circ$,
 $\angle ADB = 30^\circ$,
 $\angle BDC = 30^\circ$,
 $\angle BCD = 120^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 60^\circ$.

Вариант 14

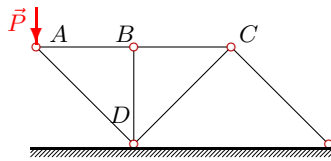
C1.



$P = 14 \text{ кН}$,
 $\angle ACB = 60^\circ$,
 $\angle ABC = 30^\circ$,
 $\angle BDC = 30^\circ$,
 $\angle BCD = 60^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 60^\circ$.

Вариант 15

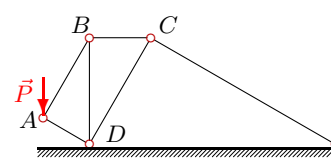
C1.



$P = 15 \text{ кН}$,
 $\angle ABD = 90^\circ$,
 $\angle ADB = 45^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 45^\circ$,
 $\angle CED = 45^\circ$.

Вариант 16

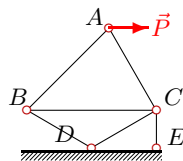
C1.



$P = 16 \text{ кН}$,
 $\angle ABD = 30^\circ$,
 $\angle ADB = 60^\circ$,
 $\angle BDC = 30^\circ$,
 $\angle BCD = 60^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 30^\circ$.

Вариант 17

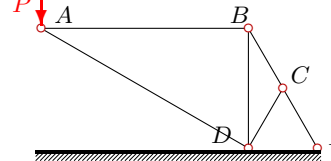
C1.



$P = 17 \text{ кН}$,
 $\angle ACB = 60^\circ$,
 $\angle ABC = 45^\circ$,
 $\angle BDC = 120^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 90^\circ$.

Вариант 18

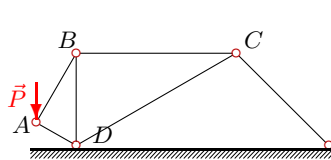
C1.



$P = 18 \text{ кН}$,
 $\angle ABD = 90^\circ$,
 $\angle ADB = 60^\circ$,
 $\angle BDC = 30^\circ$,
 $\angle BCD = 120^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 60^\circ$.

Вариант 19

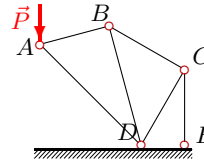
C1.



$P = 19 \text{ кН}$,
 $\angle ABD = 30^\circ$,
 $\angle ADB = 60^\circ$,
 $\angle BDC = 60^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 45^\circ$.

Вариант 20

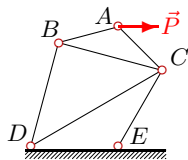
C1.



$P = 20 \text{ кН}$,
 $\angle ABD = 90^\circ$,
 $\angle ADB = 30^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 90^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 90^\circ$.

Вариант 21

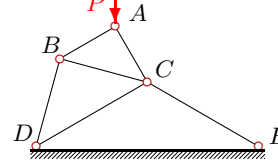
C1.



$P = 21 \text{ кН}$,
 $\angle ACB = 30^\circ$,
 $\angle ABC = 30^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 120^\circ$.

Вариант 22

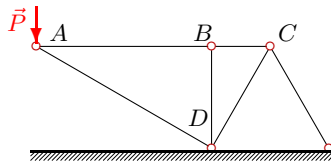
C1.



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

Вариант 23

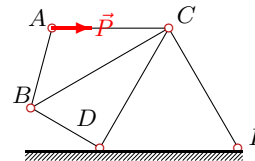
C1.



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

Вариант 24

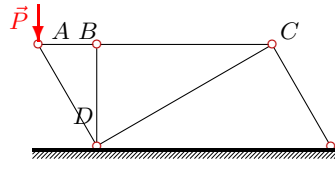
C1.



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

Вариант 25

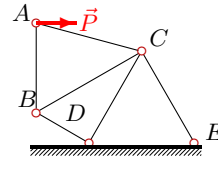
C1.



$P = 25 \text{ кН}$,
 $\angle ABD = 90^\circ$,
 $\angle ADB = 30^\circ$,
 $\angle BDC = 60^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 60^\circ$.

Вариант 26

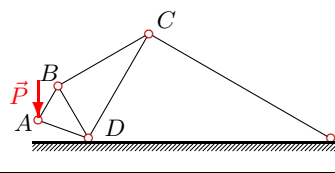
C1.



$P = 26 \text{ кН}$,
 $\angle ACB = 45^\circ$,
 $\angle ABC = 60^\circ$,
 $\angle BDC = 90^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 60^\circ$.

Вариант 27

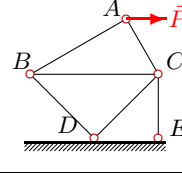
C1.



$P = 27 \text{ кН}$,
 $\angle ABD = 60^\circ$,
 $\angle ADB = 40^\circ$,
 $\angle BDC = 60^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 30^\circ$.

Вариант 28

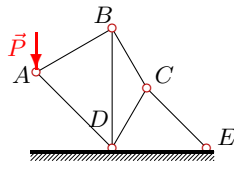
C1.



$P = 28 \text{ кН}$,
 $\angle ACB = 60^\circ$,
 $\angle ABC = 30^\circ$,
 $\angle BDC = 90^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 45^\circ$,
 $\angle CED = 90^\circ$.

Вариант 29

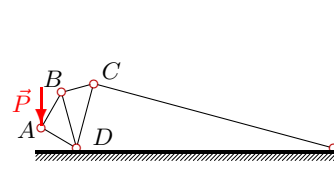
C1.



$P = 29 \text{ кН}$,
 $\angle ABD = 60^\circ$,
 $\angle ADB = 45^\circ$,
 $\angle BDC = 30^\circ$,
 $\angle BCD = 120^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 45^\circ$.

Вариант 30

C1.



$P = 30 \text{ кН}$,
 $\angle ABD = 45^\circ$,
 $\angle ADB = 45^\circ$,
 $\angle BDC = 30^\circ$,
 $\angle BCD = 60^\circ$,
 $\angle CDE = 75^\circ$,
 $\angle CED = 15^\circ$.

Отвѣты

	S_{AB}	S_{AC}	S_{AD}	S_{BC}	S_{BD}	S_{CD}	S_{CE}
1	0.866	-0.500	—	-0.750	0.433	0.415	-0.906
2	1.035	—	-2.000	1.793	-2.071	1.313	1.608
3	0.000	-3.000	—	0.000	0.000	1.500	-2.598
4	-2.000	-3.464	—	1.035	-1.464	-2.309	-3.155
5	-2.500	-4.330	—	2.165	-1.250	-2.652	-2.652
6	10.392	—	-12.000	12.000	-6.000	0.000	12.000
7	6.276	—	-5.124	4.438	-4.438	-7.687	4.438
8	4.619	—	-4.619	2.309	-4.000	-4.000	2.309
9	9.000	-12.728	—	-12.728	9.000	0.000	-18.000
10	10.000	-10.000	—	-20.000	17.321	-30.000	-20.000
11	9.862	-8.053	—	-6.974	6.974	26.026	-23.079
12	8.485	-16.392	—	-16.392	12.000	12.000	-32.785
13	6.500	—	-11.258	11.258	-13.000	0.000	11.258
14	-7.000	-12.124	—	6.062	-3.500	-6.062	-6.062
15	15.000	—	-21.213	15.000	0.000	-10.607	10.607
16	13.856	—	-8.000	6.928	-12.000	-3.464	6.000
17	15.242	-12.445	—	-29.445	21.555	41.185	-31.370
18	31.177	—	-36.000	62.354	-54.000	0.000	62.354
19	16.454	—	-9.500	8.227	-14.250	-6.023	4.259
20	16.330	—	-22.307	23.094	-16.330	-40.000	46.188
21	17.146	-6.276	—	-14.849	8.573	40.811	-33.124
22	-11.000	-19.053	—	7.778	-7.778	-13.325	-15.649
23	39.837	—	-46.000	39.837	0.000	-39.837	39.837
24	0.000	-24.000	—	0.000	0.000	24.000	-24.000
25	14.434	—	-28.868	14.434	0.000	-12.500	7.217
26	6.967	-26.917	—	-6.967	6.967	30.022	-34.044
27	25.763	—	-13.708	22.311	-12.882	-19.322	11.156
28	24.249	-14.000	—	-33.124	17.146	56.744	-52.249
29	21.229	—	-26.001	36.771	-42.459	9.853	32.968
30	25.981	—	-15.000	18.371	-18.371	-9.186	15.910