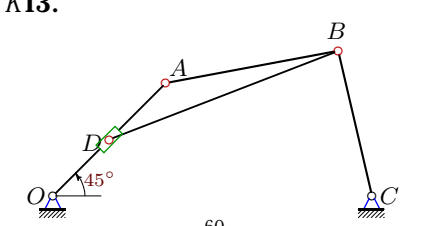
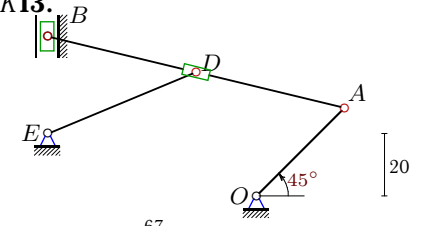
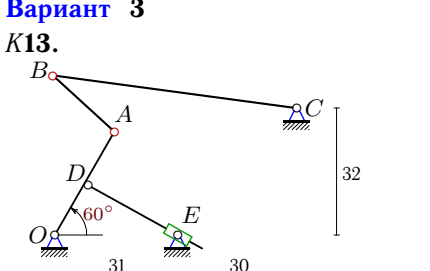
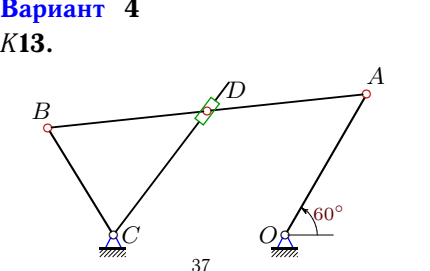
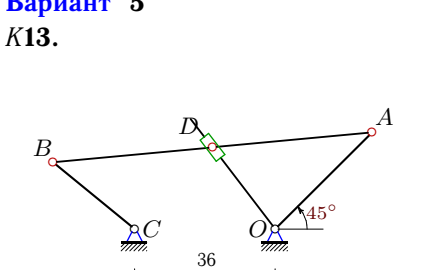
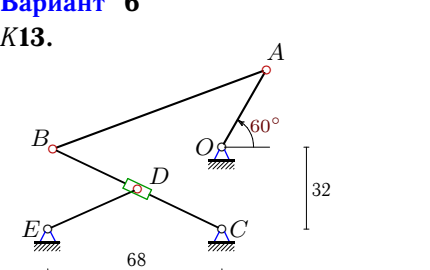
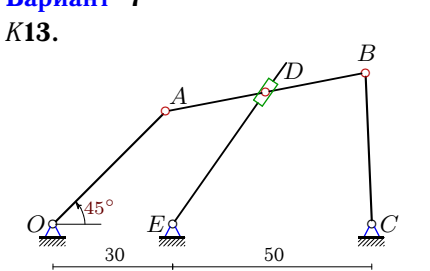
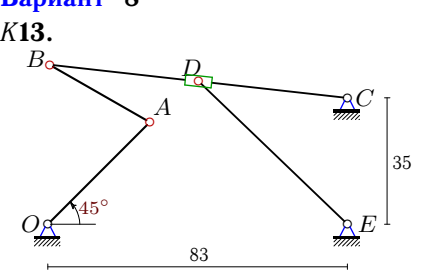


Механизм с муфтой

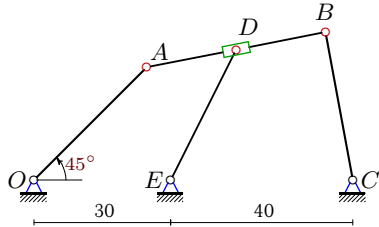
Плоский механизм с одной степенью свободы состоит из шарнирно соединенных стержней и муфты, скользящей по направляющему стержню и шарнирно закрепленной на другом стержне или вращающейся на неподвижном шарнире. Кривошип OA вращается против часовой стрелки с постоянной угловой скоростью ω_{OA} . Горизонтальные и вертикальные размеры на рисунках даны для неподвижных шарниров и для линий движения ползунков (в см). Найти скорость муфты D (или E) относительно направляющего стержня (в см/с).

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<p>Вариант 1 К13.</p>  <p>$\omega_{OA} = 1\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 30$, $AB = 33$, $BC = 28$, $OD = OA/2$.</p>	<p>Вариант 2 К13.</p>  <p>$\omega_{OA} = 2\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 98$, $AD = AB/2$.</p>
<p>Вариант 3 К13.</p>  <p>$\omega_{OA} = 3\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 30$, $AB = 21$, $BC = 32$, $OD = OA/2$.</p>	<p>Вариант 4 К13.</p>  <p>$\omega_{OA} = 4\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 35$, $AB = 69$, $BC = 27$, $AD = AB/2$.</p>
<p>Вариант 5 К13.</p>  <p>$\omega_{OA} = 5\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 35$, $AB = 82$, $BC = 27$, $AD = AB/2$.</p>	<p>Вариант 6 К13.</p>  <p>$\omega_{OA} = 6\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 35$, $AB = 89$, $BC = 73$, $BD = BC/2$.</p>
<p>Вариант 7 К13.</p>  <p>$\omega_{OA} = 7\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 51$, $BC = 38$, $AD = AB/2$.</p>	<p>Вариант 8 К13.</p>  <p>$\omega_{OA} = 8\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 32$, $BC = 83$, $BD = BC/2$.</p>

Вариант 9

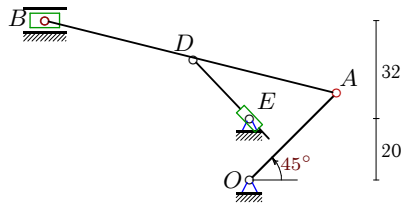
K13.



$$\omega_{OA} = 9\frac{1}{c}, \alpha = 45^\circ, OA = 35, AB = 40, BC = 33, AD = AB/2.$$

Вариант 10

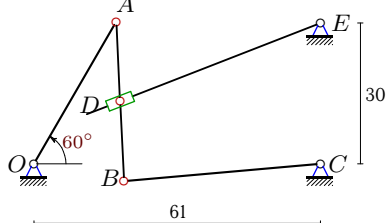
K13.



$$\omega_{OA} = 10\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 98, AD = AB/2.$$

Вариант 11

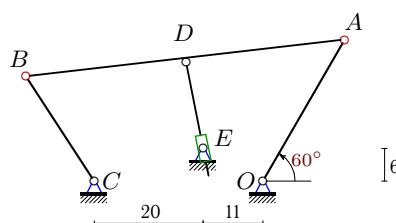
K13.



$$\omega_{OA} = 11\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 34, BC = 42, AD = AB/2.$$

Вариант 12

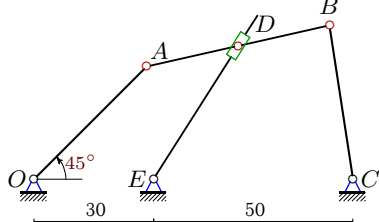
K13.



$$\omega_{OA} = 12\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 59, BC = 23, AD = AB/2.$$

Вариант 13

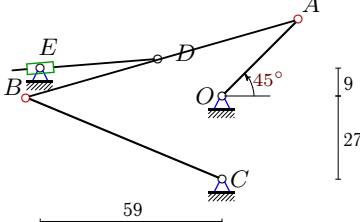
K13.



$$\omega_{OA} = 13\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 47, BC = 39, AD = AB/2.$$

Вариант 14

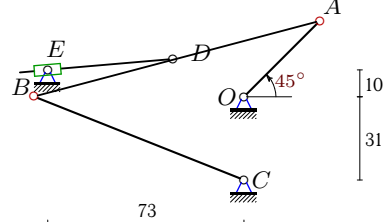
K13.



$$\omega_{OA} = 14\frac{1}{c}, \alpha = 45^\circ, OA = 35, AB = 92, BC = 69, AD = AB/2.$$

Вариант 15

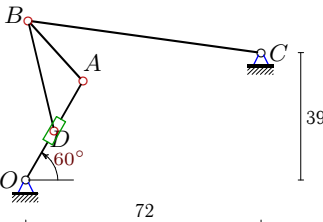
K13.



$$\omega_{OA} = 15\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 110, BC = 84, AD = AB/2.$$

Вариант 16

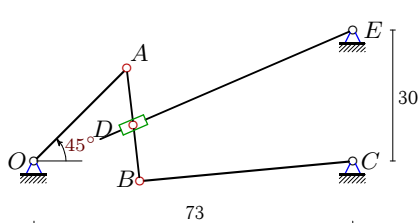
K13.



$$\omega_{OA} = 16\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 25, BC = 72, OD = OA/2.$$

Вариант 17

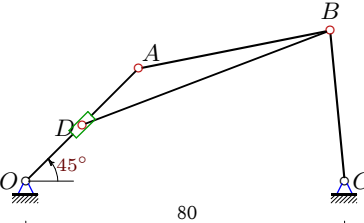
K13.



$$\omega_{OA} = 17\frac{1}{c}, \alpha = 45^\circ, OA = 30, AB = 26, BC = 49, AD = AB/2.$$

Вариант 18

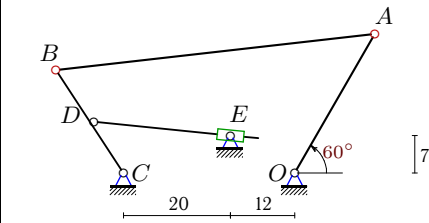
K13.



$$\omega_{OA} = 18\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 49, BC = 38, OD = OA/2.$$

Вариант 19

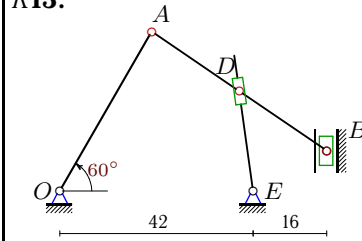
K13.



$$\omega_{OA} = 19\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 60, BC = 23, BD = BC/2.$$

Вариант 20

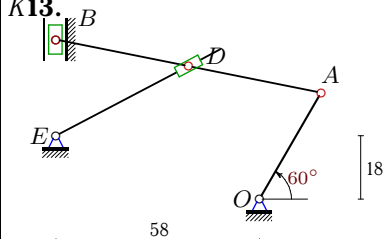
K13.



$$\omega_{OA} = 20\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 46, AD = AB/2.$$

Вариант 21

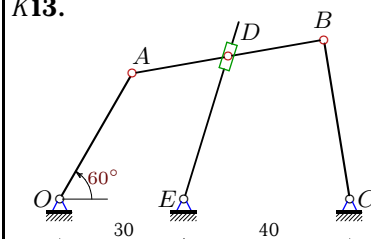
K13.



$$\omega_{OA} = 21\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 77, AD = AB/2.$$

Вариант 22

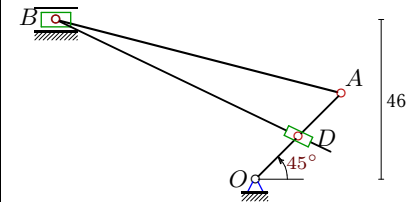
K13.



$$\omega_{OA} = 22\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 47, BC = 39, AD = AB/2.$$

Вариант 23

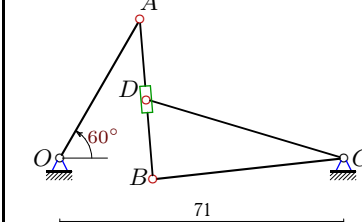
K13.



$$\omega_{OA} = 23\frac{1}{c}, \alpha = 45^\circ, OA = 35, AB = 85, OD = OA/2.$$

Вариант 24

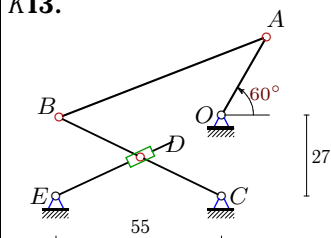
K13.



$$\omega_{OA} = 24\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 40, BC = 48, AD = AB/2.$$

Вариант 25

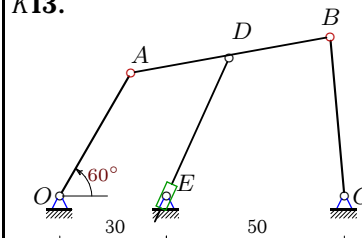
K13.



$$\omega_{OA} = 25\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 74, BC = 60, BD = BC/2.$$

Вариант 26

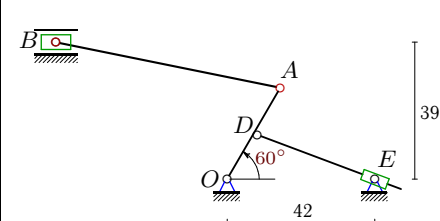
K13.



$$\omega_{OA} = 26\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 57, BC = 45, AD = AB/2.$$

Вариант 27

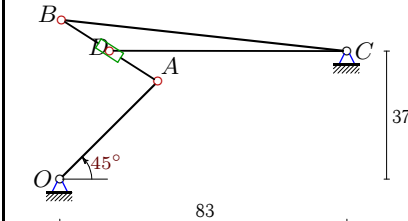
K13.



$$\omega_{OA} = 27\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 65, OD = OA/2.$$

Вариант 28

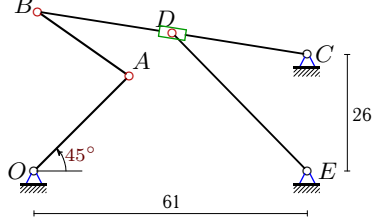
K13.



$$\omega_{OA} = 28\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 33, BC = 83, AD = AB/2.$$

Вариант 29

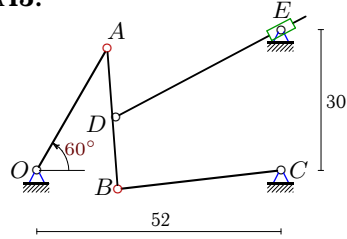
K13.



$\omega_{OA} = 29\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 30$,
 $AB = 25$, $BC = 61$, $BD = BC/2$.

Вариант 30

K13.



$\omega_{OA} = 30\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$,
 $AB = 30$, $BC = 52$, $AD = AB/2$.

Ответы

	v_A	v_B	v_D	v_r	x_B	y_B
1	30	16.9751	15.0000	11.7474	53.652	27.271
2	80	291.8322	176.4816	-50.1387	-67.000	51.195
3	90	153.0812	45.0000	-44.9922	-0.456	40.198
4	140	125.3244	114.0636	67.0600	-51.113	23.018
5	175	158.8872	112.1900	-68.6532	-56.894	17.101
6	210	186.8762	93.4381	-109.4397	-65.934	-0.668
7	280	158.5373	202.1997	24.4352	78.357	37.964
8	320	776.5920	388.2960	-297.7159	0.509	44.175
9	315	175.6974	219.5618	-5.8284	64.000	32.450
10	400	353.3866	348.1335	-322.0608	-66.803	52.000
11	385	208.6896	266.4148	-90.8801	19.159	-3.649
12	360	323.6175	291.1959	-58.1023	-43.613	19.233
13	520	279.1038	360.7024	34.9399	74.148	38.558
14	490	382.2607	246.6264	246.0969	-63.715	-0.515
15	600	505.6749	306.5292	306.5057	-78.039	0.080
16	560	832.3946	280.0000	-803.2982	0.670	48.797
17	510	399.9728	428.4954	-32.5100	24.218	-4.613
18	720	402.2517	360.0000	263.7134	76.347	37.824
19	570	513.6580	256.8290	-199.7353	-44.619	19.229
20	800	1415.5927	971.6451	-946.7111	58.000	8.718
21	735	3544.9913	1981.9660	-629.6601	-58.000	45.435
22	770	589.6147	641.1792	45.5050	63.781	38.501
23	805	716.2025	402.5000	-265.6158	-57.552	46.000
24	960	546.8548	678.5041	-1577.2423	23.285	-5.224
25	750	641.1416	320.5708	248.9277	-53.981	-0.808
26	1040	796.6263	876.5873	145.0548	76.082	44.829
27	810	784.2783	405.0000	-399.5998	-48.683	39.000
28	1120	2463.7273	1641.3360	314.7745	0.499	46.088
29	870	1951.3716	975.6858	-724.3593	0.758	35.586
30	900	506.8733	634.2489	-146.8095	17.222	-3.937