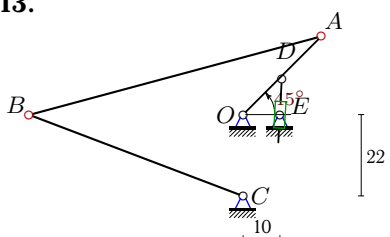
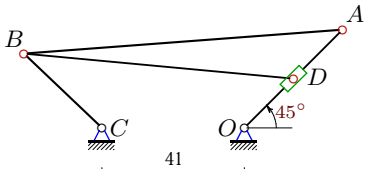
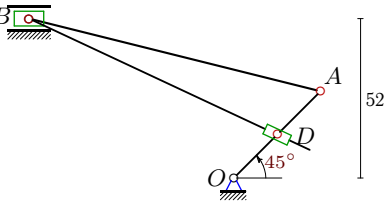
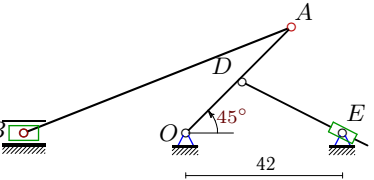
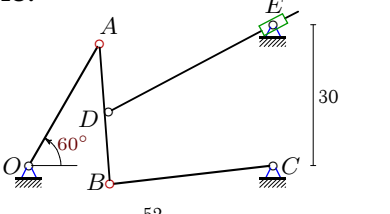
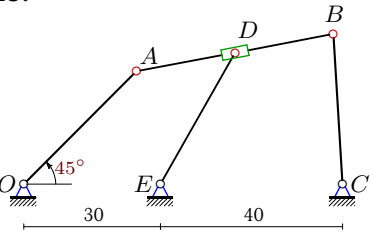
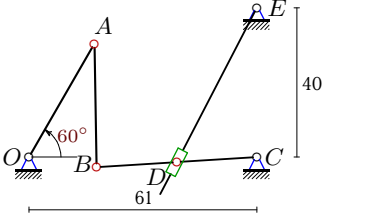
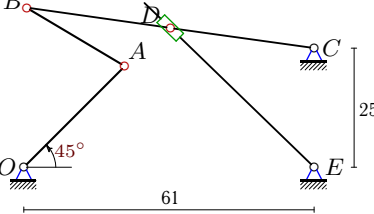


Механизм с муфтой

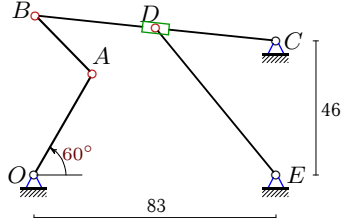
Плоский механизм с одной степенью свободы состоит из шарнирно соединенных стержней и муфты, скользящей по направляющему стержню и шарнирно закрепленной на другом стержне или вращающейся на неподвижном шарнире. Кривошип OA вращается против часовой стрелки с постоянной угловой скоростью ω_{OA} . Горизонтальные 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>$\omega_{OA} = 1\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 30$, $AB = 82$, $BC = 62$, $OD = OA/2$.</p>	<p>Вариант 2 К13.</p>  <p>$\omega_{OA} = 2\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 92$, $BC = 31$, $OD = OA/2$.</p>
<p>Вариант 3 К13.</p>  <p>$\omega_{OA} = 3\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 98$, $OD = OA/2$.</p>	<p>Вариант 4 К13.</p>  <p>$\omega_{OA} = 4\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 77$, $OD = OA/2$.</p>
<p>Вариант 5 К13.</p>  <p>$\omega_{OA} = 5\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$, $AB = 30$, $BC = 35$, $AD = AB/2$.</p>	<p>Вариант 6 К13.</p>  <p>$\omega_{OA} = 6\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$, $AB = 44$, $BC = 33$, $AD = AB/2$.</p>
<p>Вариант 7 К13.</p>  <p>$\omega_{OA} = 7\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 35$, $AB = 33$, $BC = 43$, $BD = BC/2$.</p>	<p>Вариант 8 К13.</p>  <p>$\omega_{OA} = 8\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 30$, $AB = 24$, $BC = 61$, $BD = BC/2$.</p>

Вариант 9

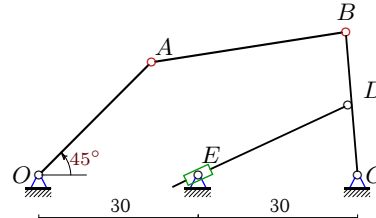
K13.



$$\omega_{OA} = 9\frac{1}{c}, \alpha = 60^\circ, OA = 40, \\ AB = 28, BC = 83, BD = BC/2.$$

Вариант 10

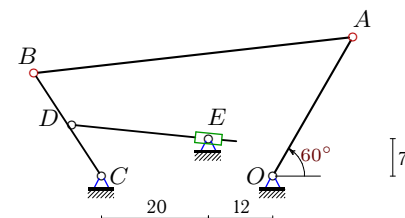
K13.



$$\omega_{OA} = 10\frac{1}{c}, \alpha = 45^\circ, OA = 30, \\ AB = 37, BC = 27, BD = BC/2.$$

Вариант 11

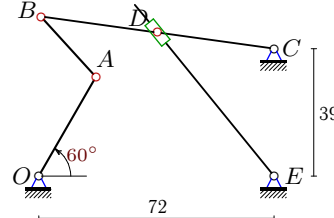
K13.



$$\omega_{OA} = 11\frac{1}{c}, \alpha = 60^\circ, OA = 30, \\ AB = 60, BC = 23, BD = BC/2.$$

Вариант 12

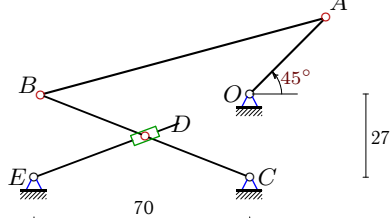
K13.



$$\omega_{OA} = 12\frac{1}{c}, \alpha = 60^\circ, OA = 35, \\ AB = 25, BC = 72, BD = BC/2.$$

Вариант 13

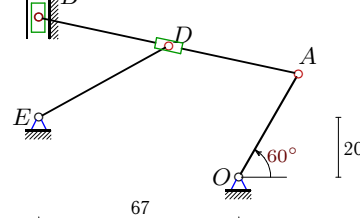
K13.



$$\omega_{OA} = 13\frac{1}{c}, \alpha = 45^\circ, OA = 35, \\ AB = 96, BC = 73, BD = BC/2.$$

Вариант 14

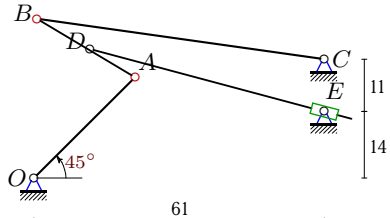
K13.



$$\omega_{OA} = 14\frac{1}{c}, \alpha = 60^\circ, OA = 40, \\ AB = 89, AD = AB/2.$$

Вариант 15

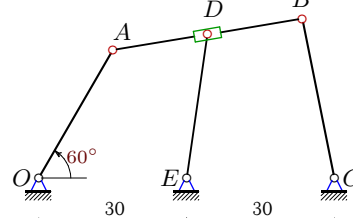
K13.



$$\omega_{OA} = 15\frac{1}{c}, \alpha = 45^\circ, OA = 30, \\ AB = 24, BC = 61, AD = AB/2.$$

Вариант 16

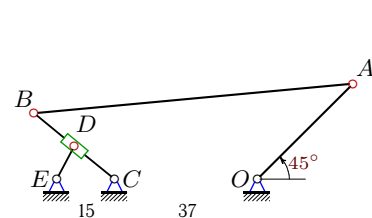
K13.



$$\omega_{OA} = 16\frac{1}{c}, \alpha = 60^\circ, OA = 30, \\ AB = 39, BC = 33, AD = AB/2.$$

Вариант 17

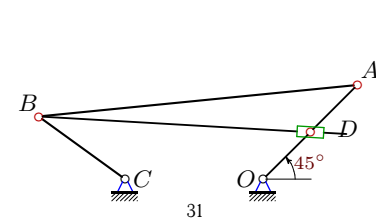
K13.



$$\omega_{OA} = 17\frac{1}{c}, \alpha = 45^\circ, OA = 35, \\ AB = 83, BC = 27, BD = BC/2.$$

Вариант 18

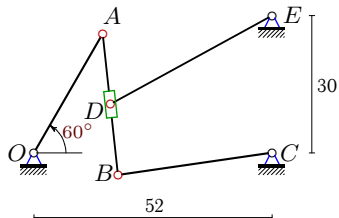
K13.



$$\omega_{OA} = 18\frac{1}{c}, \alpha = 45^\circ, OA = 30, \\ AB = 72, BC = 24, OD = OA/2.$$

Вариант 19

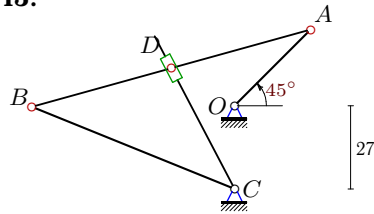
K13.



$$\omega_{OA} = 19\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 31, BC = 34, AD = AB/2.$$

Вариант 20

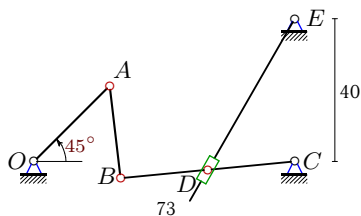
K13.



$$\omega_{OA} = 20\frac{1}{c}, \alpha = 45^\circ, OA = 35, AB = 94, BC = 71, AD = AB/2.$$

Вариант 21

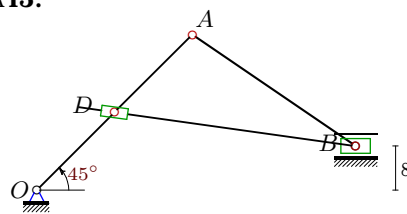
K13.



$$\omega_{OA} = 21\frac{1}{c}, \alpha = 45^\circ, OA = 30, AB = 26, BC = 49, BD = BC/2.$$

Вариант 22

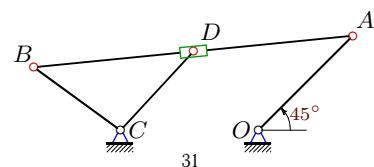
K13.



$$\omega_{OA} = 22\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 36, OD = OA/2.$$

Вариант 23

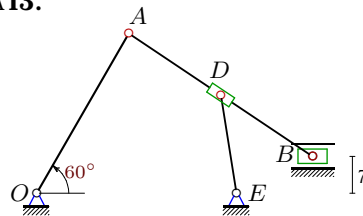
K13.



$$\omega_{OA} = 23\frac{1}{c}, \alpha = 45^\circ, OA = 30, AB = 72, BC = 24, AD = AB/2.$$

Вариант 24

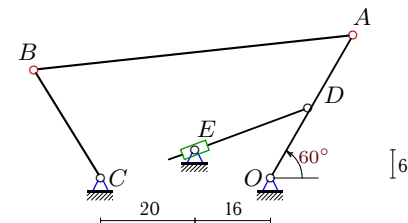
K13.



$$\omega_{OA} = 24\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 42, AD = AB/2.$$

Вариант 25

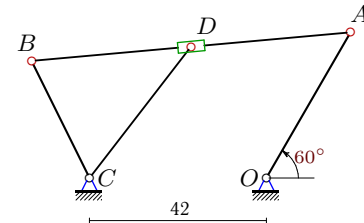
K13.



$$\omega_{OA} = 25\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 68, BC = 27, OD = OA/2.$$

Вариант 26

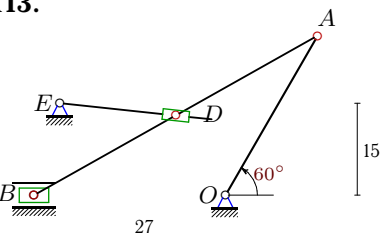
K13.



$$\omega_{OA} = 26\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 76, BC = 31, AD = AB/2.$$

Вариант 27

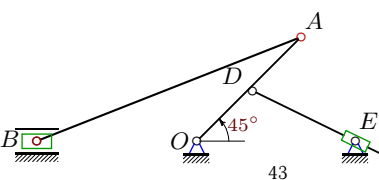
K13.



$$\omega_{OA} = 27\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 53, AD = AB/2.$$

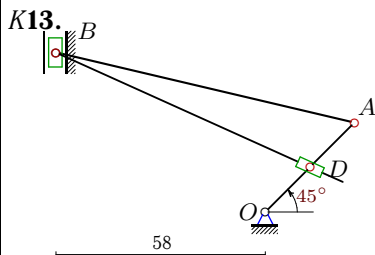
Вариант 28

K13.



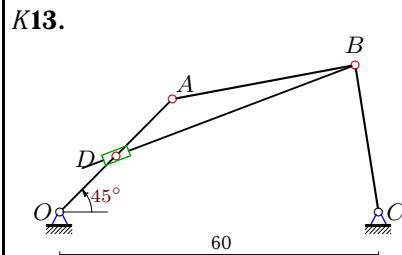
$$\omega_{OA} = 28\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 77, OD = OA/2.$$

Вариант 29



$\omega_{OA} = 29 \frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$,
 $AB = 85$, $OD = OA/2$.

Вариант 30



$\omega_{OA} = 30 \frac{1}{c}$, $\alpha = 45^\circ$, $OA = 30$,
 $AB = 35$, $BC = 28$, $OD = OA/2$.

Ответы

	v_A	v_B	v_D	v_r	x_B	y_B
1	30	25.6448	15.0000	-9.9837	-57.983	-0.046
2	80	70.3050	40.0000	19.9688	-63.456	21.372
3	120	106.0160	60.0000	-39.6269	-66.803	52.000
4	160	68.4550	80.0000	-76.0477	-43.333	0.000
5	150	84.4789	105.7082	-24.4683	17.222	-3.937
6	210	119.2044	151.2267	-7.0981	67.980	32.938
7	245	126.3613	63.1806	54.1509	18.084	-2.684
8	240	600.9367	300.4683	-176.9237	0.595	33.496
9	360	542.2042	271.1021	-267.7642	0.456	54.692
10	300	177.4135	88.7067	83.2284	57.772	26.908
11	330	297.3809	148.6905	-115.6362	-44.619	19.229
12	420	624.2960	312.1480	-213.2328	0.670	48.797
13	455	380.4398	190.2199	126.8387	-67.932	-0.276
14	560	2528.8815	1425.2206	-619.0597	-67.000	53.403
15	450	1126.7562	721.5052	-262.5951	0.595	33.496
16	480	371.1523	398.5656	86.9857	53.477	32.349
17	595	541.6266	270.8133	1360.8354	-57.898	17.096
18	540	515.1940	270.0000	-76.6483	-50.433	14.084
19	570	336.8175	411.0039	229.5581	18.346	-4.838
20	700	565.6988	353.7885	-151.0612	-65.826	-0.394
21	630	494.0841	247.0420	201.4541	24.218	-4.613
22	880	1046.6451	440.0000	685.2914	58.026	8.000
23	690	658.3035	437.6913	418.8113	-50.433	14.084
24	840	1007.6955	892.6322	-508.5230	52.437	7.000
25	875	781.7635	437.5000	279.4592	-50.108	23.021
26	1040	911.1416	861.0636	704.1213	-55.693	27.812
27	810	473.7037	621.5068	605.7075	-31.195	0.000
28	1120	479.1849	560.0000	-529.8322	-43.333	0.000
29	1015	3773.8285	507.5000	-1079.4875	-58.000	44.182
30	900	508.6014	450.0000	313.1113	55.615	27.655