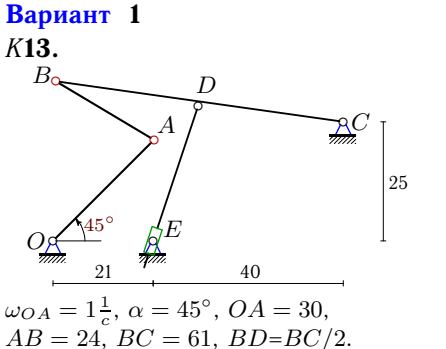
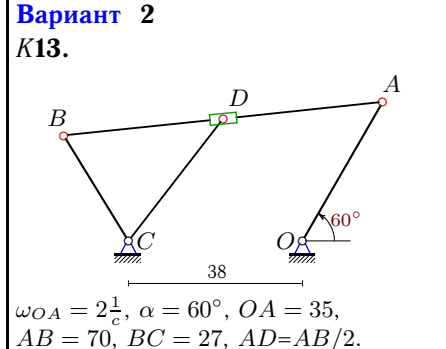
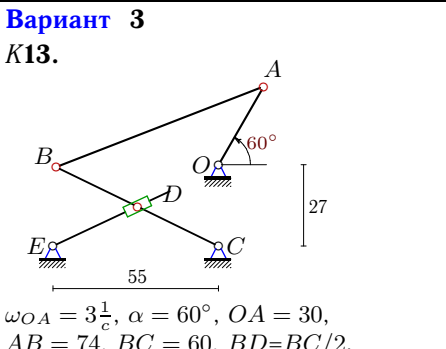
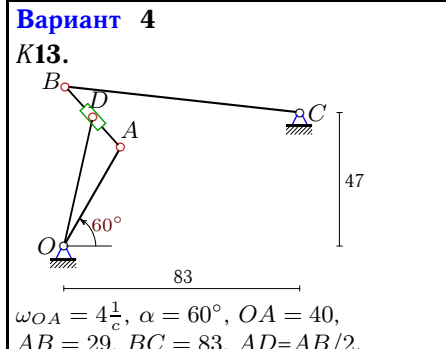
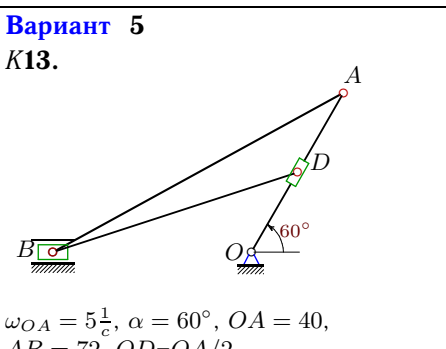
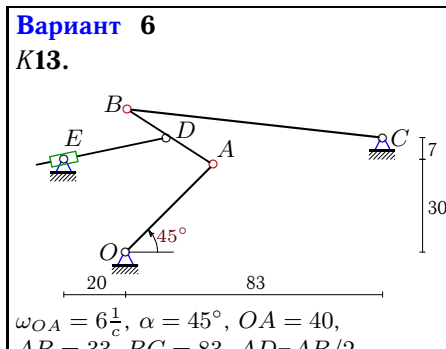
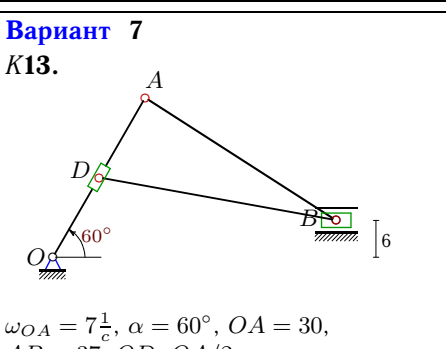
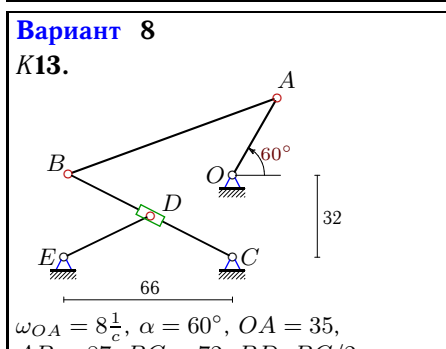


Механизм с муфтой

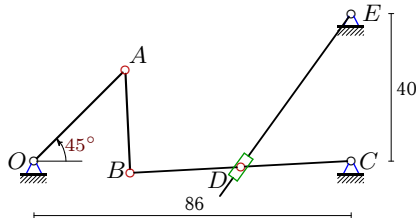
Плоский механизм с одной степенью свободы состоит из шарнирно соединенных стержней и муфты, скользящей по направляющему стержню и шарнирно закрепленной на другом стержне или вращающейся на неподвижном шарнире. Кривошип OA вращается против часовой стрелки с постоянной угловой скоростью ω_{OA} . Горизонтальные 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>$\omega_{OA} = 1\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 30$, $AB = 24$, $BC = 61$, $BD = BC/2$.</p>	<p>Вариант 2 К13.</p>  <p>$\omega_{OA} = 2\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 35$, $AB = 70$, $BC = 27$, $AD = AB/2$.</p>
<p>Вариант 3 К13.</p>  <p>$\omega_{OA} = 3\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 30$, $AB = 74$, $BC = 60$, $BD = BC/2$.</p>	<p>Вариант 4 К13.</p>  <p>$\omega_{OA} = 4\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 40$, $AB = 29$, $BC = 83$, $AD = AB/2$.</p>
<p>Вариант 5 К13.</p>  <p>$\omega_{OA} = 5\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 40$, $AB = 72$, $OD = OA/2$.</p>	<p>Вариант 6 К13.</p>  <p>$\omega_{OA} = 6\frac{1}{2}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 33$, $BC = 83$, $AD = AB/2$.</p>
<p>Вариант 7 К13.</p>  <p>$\omega_{OA} = 7\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 30$, $AB = 37$, $OD = OA/2$.</p>	<p>Вариант 8 К13.</p>  <p>$\omega_{OA} = 8\frac{1}{2}$, $\alpha = 60^\circ$, $OA = 35$, $AB = 87$, $BC = 72$, $BD = BC/2$.</p>

Вариант 9

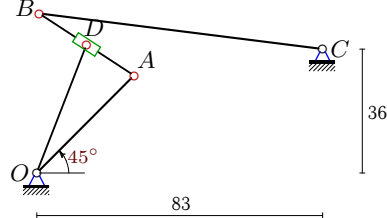
K13.



$\omega_{OA} = 9\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$,
 $AB = 28$, $BC = 60$, $BD = BC/2$.

Вариант 10

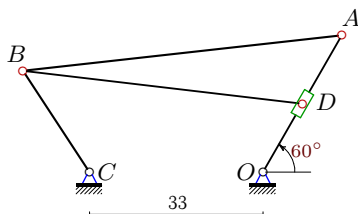
K13.



$\omega_{OA} = 10\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$,
 $AB = 33$, $BC = 83$, $AD = AB/2$.

Вариант 11

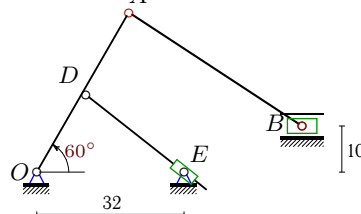
K13.



$\omega_{OA} = 11\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$,
 $AB = 61$, $BC = 23$, $OD = OA/2$.

Вариант 12

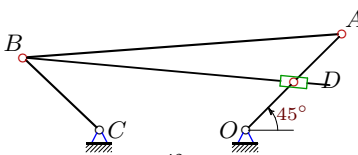
K13.



$\omega_{OA} = 12\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 40$,
 $AB = 45$, $OD = OA/2$.

Вариант 13

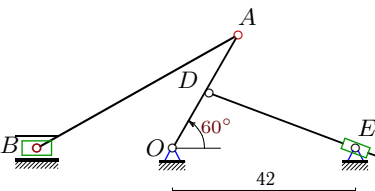
K13.



$\omega_{OA} = 13\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$,
 $AB = 94$, $BC = 31$, $OD = OA/2$.

Вариант 14

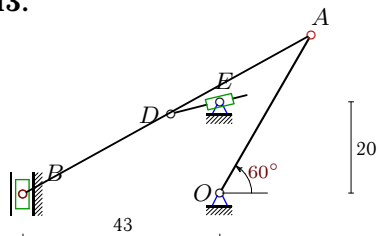
K13.



$\omega_{OA} = 14\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$,
 $AB = 53$, $OD = OA/2$.

Вариант 15

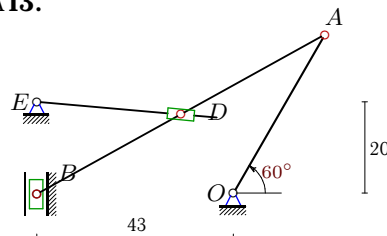
K13.



$\omega_{OA} = 15\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 40$,
 $AB = 72$, $AD = AB/2$.

Вариант 16

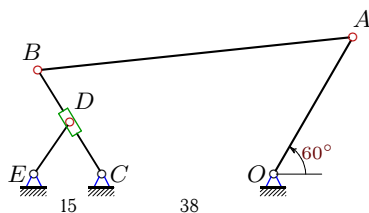
K13.



$\omega_{OA} = 16\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 40$,
 $AB = 72$, $AD = AB/2$.

Вариант 17

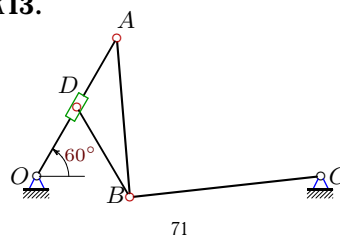
K13.



$\omega_{OA} = 17\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 35$,
 $AB = 70$, $BC = 27$, $BD = BC/2$.

Вариант 18

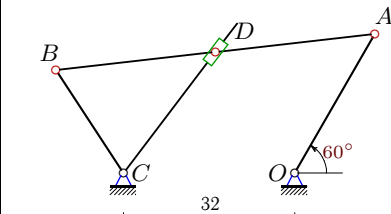
K13.



$\omega_{OA} = 18\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 40$,
 $AB = 40$, $BC = 48$, $OD = OA/2$.

Вариант 19

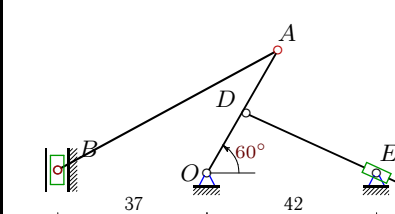
K13.



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

Вариант 20

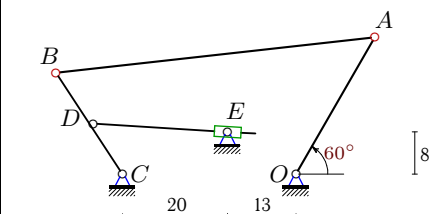
K13.



$$\omega_{OA} = 20\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 62, OD = OA/2.$$

Вариант 21

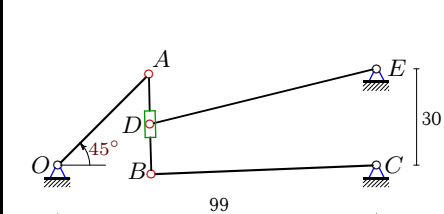
K13.



$$\omega_{OA} = 21\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 61, BC = 23, BD = BC/2.$$

Вариант 22

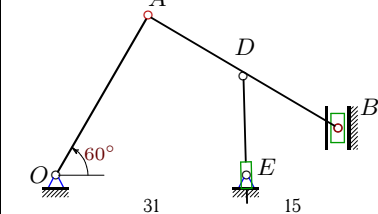
K13.



$$\omega_{OA} = 22\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 31, BC = 70, AD = AB/2.$$

Вариант 23

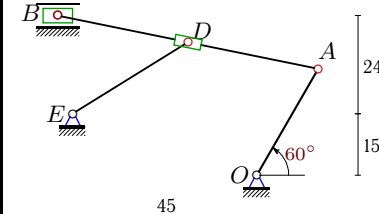
K13.



$$\omega_{OA} = 23\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 36, AD = AB/2.$$

Вариант 24

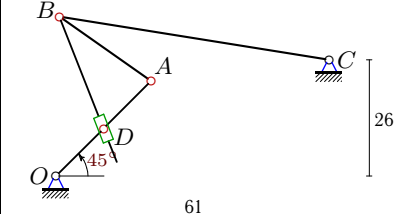
K13.



$$\omega_{OA} = 24\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 65, AD = AB/2.$$

Вариант 25

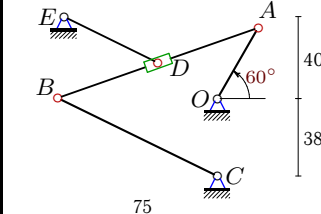
K13.



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

Вариант 26

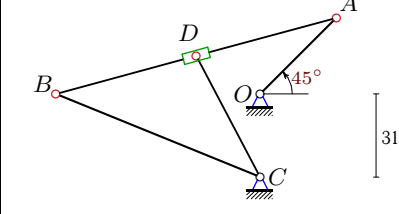
K13.



$$\omega_{OA} = 26\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 104, BC = 87, AD = AB/2.$$

Вариант 27

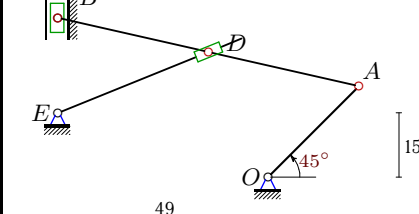
K13.



$$\omega_{OA} = 27\frac{1}{c}, \alpha = 45^\circ, OA = 40, AB = 108, BC = 82, AD = AB/2.$$

Вариант 28

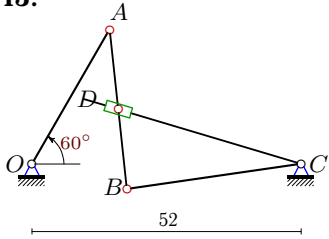
K13.



$$\omega_{OA} = 28\frac{1}{c}, \alpha = 45^\circ, OA = 30, AB = 72, AD = AB/2.$$

Вариант 29

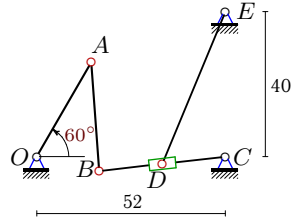
K13.



$\omega_{OA} = 29\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$,
 $AB = 31$, $BC = 34$, $AD = AB/2$.

Вариант 30

K13.



$\omega_{OA} = 30\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$,
 $AB = 30$, $BC = 35$, $BD = BC/2$.

Ответы

	v_A	v_B	v_D	v_r	x_B	y_B
1	30	75.1171	37.5585	-36.9281	0.595	33.496
2	70	62.7802	57.0777	49.3131	-52.119	23.014
3	90	76.9370	38.4685	29.8713	-53.981	-0.808
4	160	230.1988	164.4697	240.6978	0.501	56.107
5	200	118.3230	100.0000	61.3814	-43.119	0.000
6	240	527.9416	351.7149	-16.2566	0.499	46.088
7	210	249.2354	105.0000	433.4157	46.141	6.000
8	280	246.4573	123.2286	-160.4940	-64.239	0.517
9	315	233.1296	116.5648	90.8082	26.086	-3.219
10	400	893.7055	591.0893	2490.5074	0.643	46.311
11	330	298.0911	165.0000	194.2710	-45.625	19.225
12	480	572.7499	240.0000	-237.5384	57.654	10.000
13	520	458.5442	260.0000	-85.0108	-65.461	21.366
14	420	245.6241	210.0000	-207.1999	-31.195	0.000
15	600	639.1486	310.2506	-292.4418	-43.000	-0.216
16	640	681.7585	330.9340	260.1059	-43.000	-0.216
17	595	533.6315	266.8158	603.1250	-52.119	23.014
18	720	410.1411	360.0000	-123.0119	23.285	-5.224
19	570	513.6580	461.5426	278.1143	-44.619	19.229
20	700	767.7163	350.0000	-348.3908	-37.000	0.752
21	630	569.0830	284.5415	-227.8440	-45.625	19.225
22	880	637.5415	707.8781	770.3344	29.052	-2.706
23	690	1357.0897	901.9679	-859.5424	46.000	7.678
24	720	697.1363	684.4307	641.3154	-48.683	39.000
25	750	1682.2169	375.0000	-1104.6191	0.758	35.586
26	1040	952.3090	680.6030	738.9013	-78.146	0.240
27	1080	883.7634	549.3196	1061.1818	-75.934	-0.047
28	840	3210.1975	1925.1291	-437.1537	-49.000	37.154
29	870	514.0899	627.3217	-531.2436	18.346	-4.838
30	900	506.8733	253.4366	457.8856	17.222	-3.937