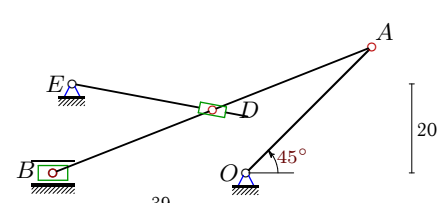
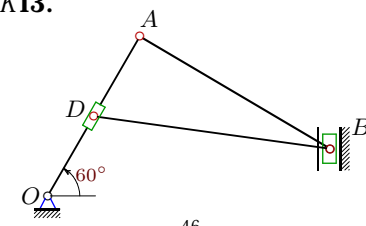
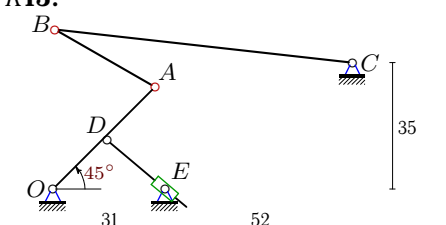
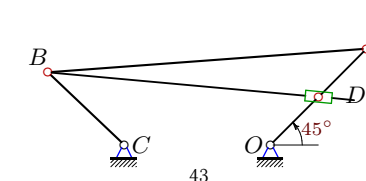
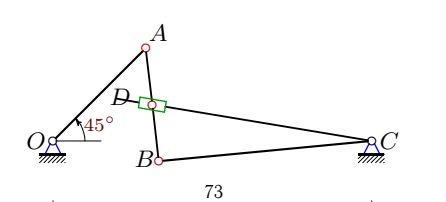
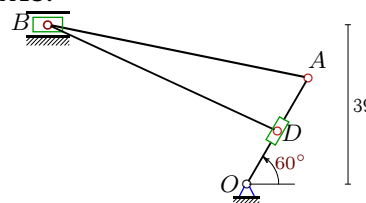
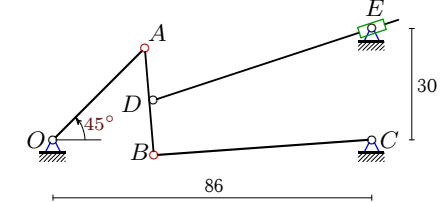
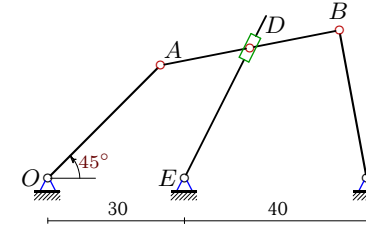


Механизм с муфтой

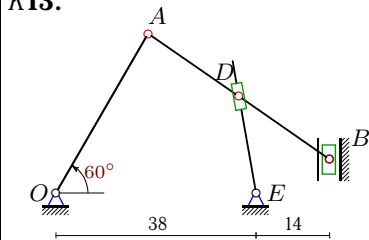
Плоский механизм с одной степенью свободы состоит из шарнирно соединенных стержней и муфты, скользящей по направляющему стержню и шарнирно закрепленной на другом стержне или вращающейся на неподвижном шарнире. Кривошип OA вращается против часовой стрелки с постоянной угловой скоростью ω_{OA} . Горизонтальные 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).

Кирсанов М.Н. Решебник. Теоретическая механика с. 216.

<p>Вариант 1 К13.</p>  <p>$\omega_{OA} = 1\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 77$, $AD = AB/2$.</p>	<p>Вариант 2 К13.</p>  <p>$\omega_{OA} = 2\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$, $AB = 36$, $OD = OA/2$.</p>
<p>Вариант 3 К13.</p>  <p>$\omega_{OA} = 3\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 32$, $BC = 83$, $OD = OA/2$.</p>	<p>Вариант 4 К13.</p>  <p>$\omega_{OA} = 4\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 40$, $AB = 94$, $BC = 31$, $OD = OA/2$.</p>
<p>Вариант 5 К13.</p>  <p>$\omega_{OA} = 5\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 30$, $AB = 26$, $BC = 49$, $AD = AB/2$.</p>	<p>Вариант 6 К13.</p>  <p>$\omega_{OA} = 6\frac{1}{c}$, $\alpha = 60^\circ$, $OA = 30$, $AB = 65$, $OD = OA/2$.</p>
<p>Вариант 7 К13.</p>  <p>$\omega_{OA} = 7\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$, $AB = 29$, $BC = 59$, $AD = AB/2$.</p>	<p>Вариант 8 К13.</p>  <p>$\omega_{OA} = 8\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$, $AB = 40$, $BC = 33$, $AD = AB/2$.</p>

Вариант 9

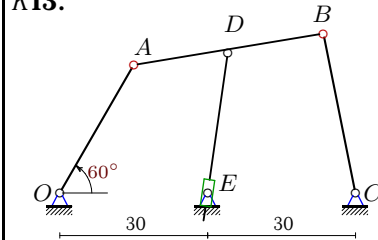
K13.



$$\omega_{OA} = 9\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 42, AD = AB/2.$$

Вариант 10

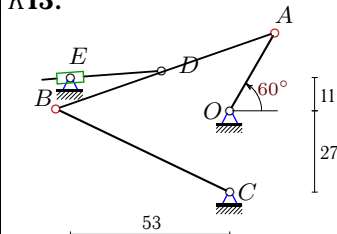
K13.



$$\omega_{OA} = 10\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 39, BC = 33, AD = AB/2.$$

Вариант 11

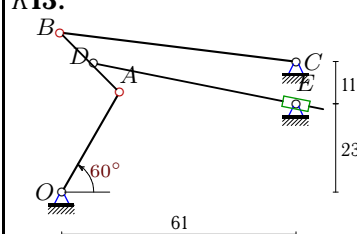
K13.



$$\omega_{OA} = 11\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 77, BC = 64, AD = AB/2.$$

Вариант 12

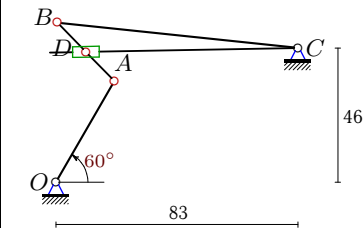
K13.



$$\omega_{OA} = 12\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 22, BC = 62, AD = AB/2.$$

Вариант 13

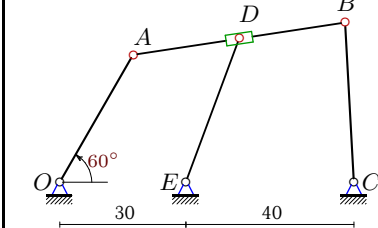
K13.



$$\omega_{OA} = 13\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 28, BC = 83, AD = AB/2.$$

Вариант 14

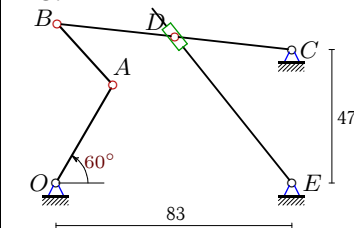
K13.



$$\omega_{OA} = 14\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 51, BC = 38, AD = AB/2.$$

Вариант 15

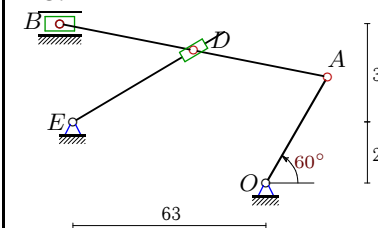
K13.



$$\omega_{OA} = 15\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 29, BC = 83, BD = BC/2.$$

Вариант 16

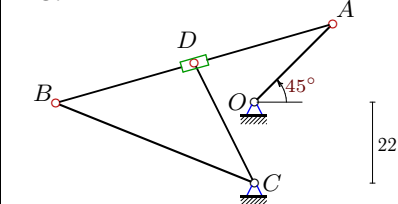
K13.



$$\omega_{OA} = 16\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 89, AD = AB/2.$$

Вариант 17

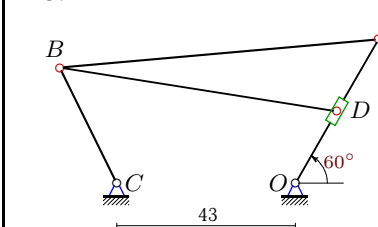
K13.



$$\omega_{OA} = 17\frac{1}{c}, \alpha = 45^\circ, OA = 30, AB = 78, BC = 58, AD = AB/2.$$

Вариант 18

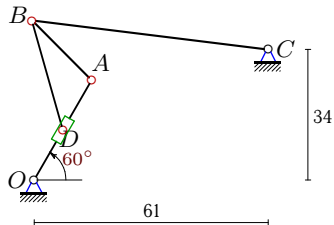
K13.



$$\omega_{OA} = 18\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 77, BC = 31, OD = OA/2.$$

Вариант 19

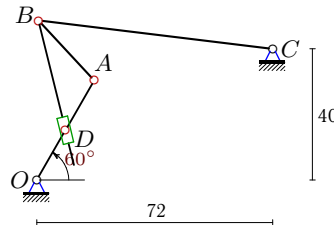
K13.



$$\omega_{OA} = 19\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 22, BC = 62, OD = OA/2.$$

Вариант 20

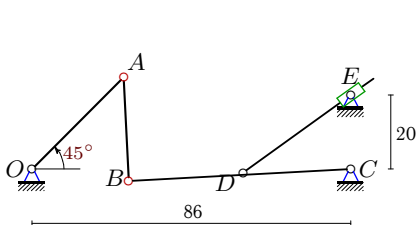
K13.



$$\omega_{OA} = 20\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 25, BC = 72, OD = OA/2.$$

Вариант 21

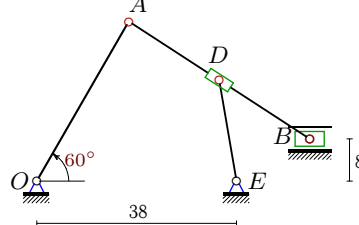
K13.



$$\omega_{OA} = 21\frac{1}{c}, \alpha = 45^\circ, OA = 35, AB = 28, BC = 60, BD = BC/2.$$

Вариант 22

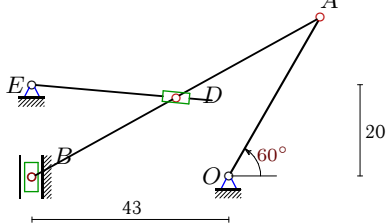
K13.



$$\omega_{OA} = 22\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 41, AD = AB/2.$$

Вариант 23

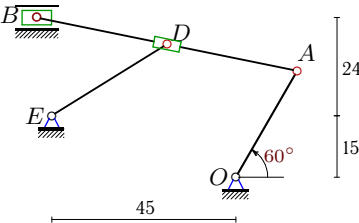
K13.



$$\omega_{OA} = 23\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 72, AD = AB/2.$$

Вариант 24

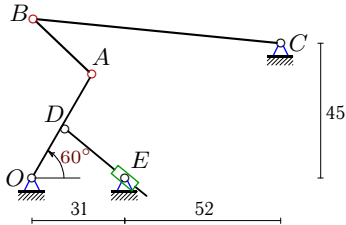
K13.



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

Вариант 25

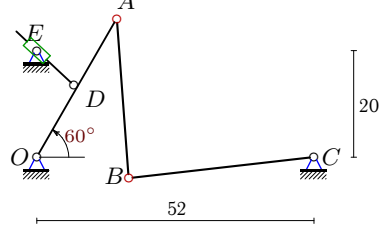
K13.



$$\omega_{OA} = 25\frac{1}{c}, \alpha = 60^\circ, OA = 40, AB = 27, BC = 83, OD = OA/2.$$

Вариант 26

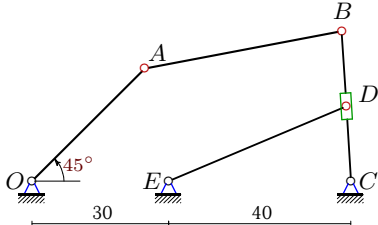
K13.



$$\omega_{OA} = 26\frac{1}{c}, \alpha = 60^\circ, OA = 30, AB = 30, BC = 35, OD = OA/2.$$

Вариант 27

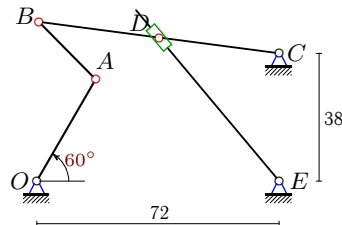
K13.



$$\omega_{OA} = 27\frac{1}{c}, \alpha = 45^\circ, OA = 35, AB = 44, BC = 33, BD = BC/2.$$

Вариант 28

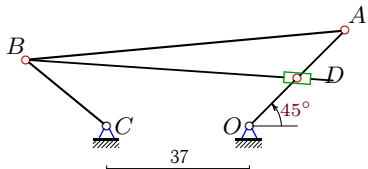
K13.



$$\omega_{OA} = 28\frac{1}{c}, \alpha = 60^\circ, OA = 35, AB = 24, BC = 72, BD = BC/2.$$

Вариант 29

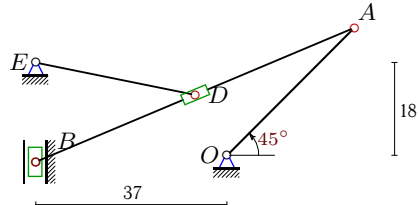
K13.



$\omega_{OA} = 29\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$,
 $AB = 83$, $BC = 27$, $OD = OA/2$.

Вариант 30

K13.



$\omega_{OA} = 30\frac{1}{c}$, $\alpha = 45^\circ$, $OA = 35$,
 $AB = 67$, $AD = AB/2$.

Ответы

	v_A	v_B	v_D	v_r	x_B	y_B
1	40	17.1137	26.7441	24.9034	-43.333	0.000
2	60	118.0078	30.0000	-30.9245	46.000	7.678
3	120	291.2220	60.0000	-59.7711	0.509	44.175
4	160	141.0905	80.0000	-26.1572	-65.461	21.366
5	150	117.6391	126.0281	-75.9621	24.218	-4.613
6	180	174.2841	90.0000	762.1282	-48.683	39.000
7	245	186.9848	202.5919	-32.4823	27.146	-4.152
8	280	156.1755	195.1660	3.1743	64.000	32.450
9	315	550.4153	379.3293	-372.3316	52.000	6.358
10	300	231.9702	249.1035	-16.4983	53.477	32.349
11	330	305.9824	216.2405	212.4994	-57.716	0.656
12	360	563.7739	389.2453	-191.7807	-0.538	41.556
13	520	783.1839	551.1175	-174.6101	0.456	54.692
14	490	384.6644	419.4512	-74.4771	67.926	37.943
15	600	863.2455	431.6227	-305.3967	0.501	56.107
16	640	617.8928	607.5223	422.6329	-67.291	52.000
17	510	401.9074	255.6988	591.2673	-53.772	-0.262
18	720	631.6124	360.0000	502.0790	-56.696	27.810
19	570	892.6420	285.0000	-887.0817	-0.538	41.556
20	700	1033.3252	350.0000	-724.3575	0.523	48.662
21	735	543.9691	271.9845	147.0549	26.086	-3.219
22	770	916.5542	814.7639	-477.5786	51.898	8.000
23	920	980.0278	475.7176	373.9022	-43.000	-0.216
24	720	697.1363	684.4307	641.3154	-48.683	39.000
25	1000	1586.7915	500.0000	-493.1207	0.408	53.219
26	780	439.2902	390.0000	379.9056	17.222	-3.937
27	945	536.4199	268.2100	762.0789	67.980	32.938
28	980	1542.3044	771.1522	-522.1967	0.611	47.363
29	1015	923.9513	507.5000	-153.6734	-57.898	17.096
30	1050	1020.7275	396.4472	406.9304	-37.000	-1.253