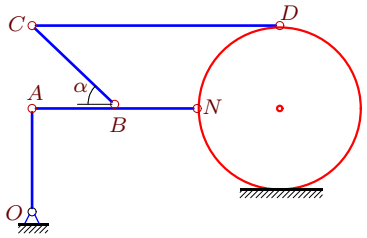
Кинематический анализ плоского механизма

В указанном положении механизма задана угловая скорость одного из звеньев. Длины звеньев даны в сантиметрах. Стержни, направление которых не указано, считать горизонтальными или вертикальными. Диск катится по горизонтальной поверхности без проскальзывания. Найти угловые скорости всех звеньев механизма.

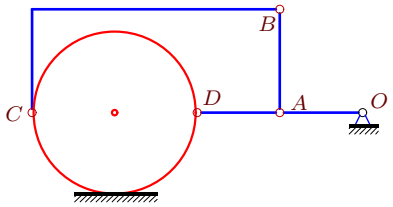
Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.158.)

Задача К-26.35. *18*



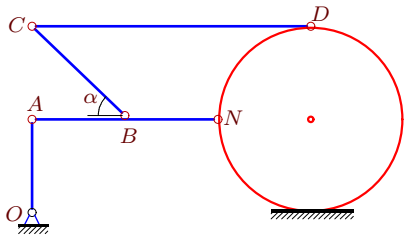
$\omega_{OA_z} = 8c^{-1}$, $R = 4$, $OA = 5$,
$AB = 4$, $BN = 4$, $BC = 4\sqrt{2}$, $CD = 12$, α=45°

Задача К-26.36.



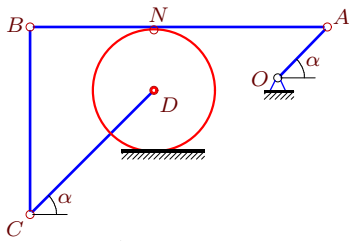
$\omega_{OA_z} = 3c^{-1}$, $R = 4$, $OA = 4$,
$AB = 5$, $AD = 4$.

Задача К-26.37.



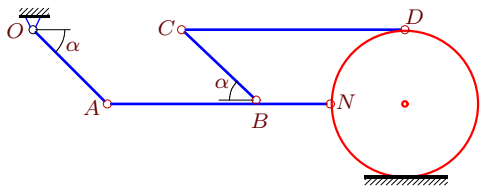
$\omega_{OA_z} = 2c^{-1}$, $R = 6$, $OA = 6$,
$AB = 6$, $BN = 6$, $BC = 6\sqrt{2}$, $CD = 18$, α=45°

Задача К-26.38.



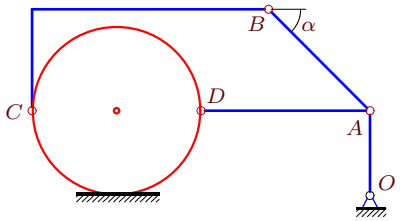
$\omega_{OA_z} = 105c^{-1}$, $R = 5$, $OA = 4\sqrt{2}$,
$CD = 10\sqrt{2}$, $AN = 14$, $AB = 24$, $\alpha = 45°$.

Задача К-26.39.



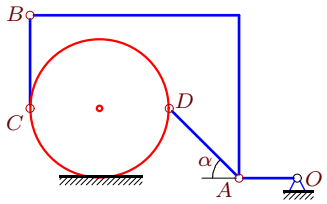
$\omega_{OA_z} = 3c^{-1}$, $R = 4$, $OA = 4\sqrt{2}$,
$AB = 8$, $BN = 4$, $BC = 4\sqrt{2}$, $CD = 12$, α=45°

Задача К-26.40.



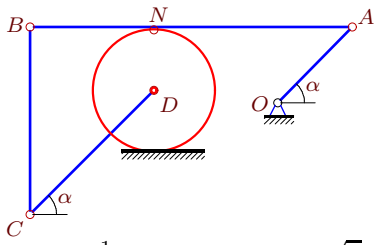
$\omega_{OA_z} = 4c^{-1}$, $R = 5$, $OA = 5$,
$AB = 6\sqrt{2}$, $AD = 10$, $\alpha = 45°$.

Задача К-26.41.



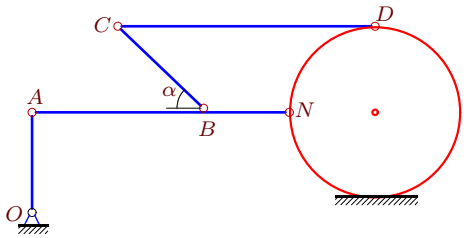
$\omega_{OA_z} = 12c^{-1}$, $R = 6$, $OA = 5$,
$AD = 6\sqrt{2}$, $BC = 8$, $\alpha = 45°$.

Задача К-26.42.



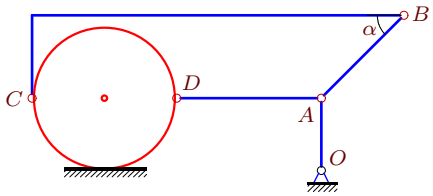
$\omega_{OA_z} = 40c^{-1}$, $R = 5$, $OA = 6\sqrt{2}$,
$CD = 10\sqrt{2}$, $AN = 16$, $AB = 26$, $\alpha = 45°$.

Задача К-26.43.



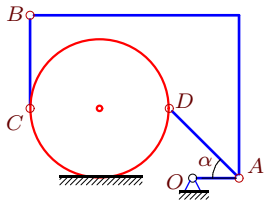
$\omega_{OA_z} = 54c^{-1}$, $R = 6$, $OA = 7$,
$AB = 12$, $BN = 6$, $BC = 6\sqrt{2}$, $CD = 18$, α=45°

Задача К-26.44.



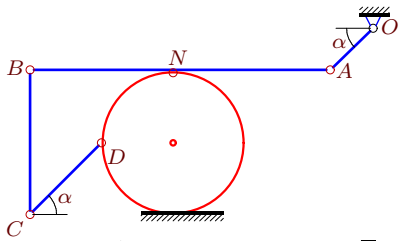
$\omega_{OA_z} = 4c^{-1}$, $R = 7$, $OA = 7$,
$AB = 8\sqrt{2}$, $AD = 14$, $\alpha = 45°$.

Задача К-26.45.



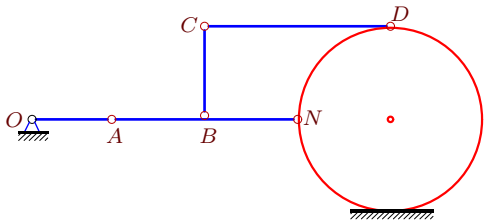
$\omega_{OA_z} = 3c^{-1}$, $R = 6$, $OA = 4$,
$AD = 6\sqrt{2}$, $BC = 8$, $\alpha = 45°$.

Задача К-26.46.



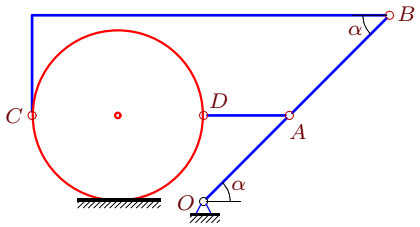
$\omega_{OA_z} = 110c^{-1}$, $R = 5$, $OA = 3\sqrt{2}$,
$CD = 5\sqrt{2}$, $AN = 11$, $AB = 21$, $\alpha = 45°$.

Задача К-26.47.



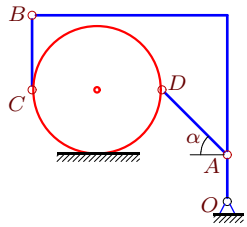
$\omega_{OA_z} = 14c^{-1}$, $R = 7$, $OA = 6$,
$AB = 7$, $BN = BC = 7$, $CD = 14$.

Задача К-26.48.



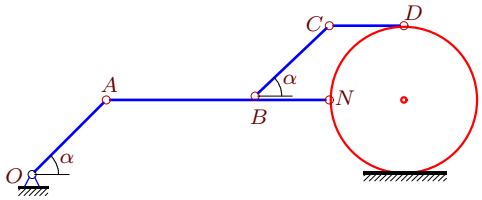
$\omega_{OA_z} = 3c^{-1}$, $R = 6$, $OA = 6\sqrt{2}$,
$AB = 7\sqrt{2}$, $AD = 6$, $\alpha = 45°$.

Задача К-26.49.



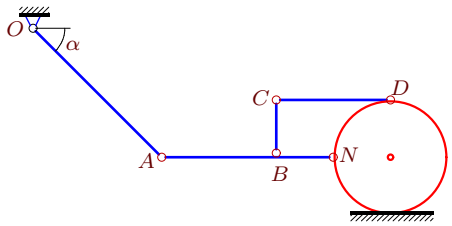
$\omega_{OA_z} = 84c^{-1}$, $R = 7$, $OA = 5$,
$AD = 7\sqrt{2}$, $BC = 8$, $\alpha = 45°$.

Задача К-26.50.



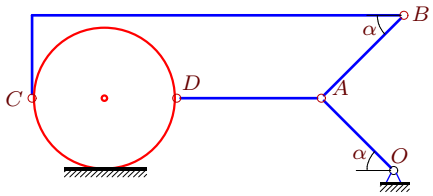
$\omega_{OA_z} = 3c^{-1}$, $R = 4$, $OA = 4\sqrt{2}$,
$AB = 8$, $BN = 4$, $BC = 4\sqrt{2}$, $CD = 4$, α=45°

Задача К-26.51.



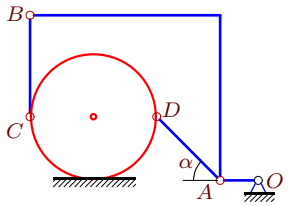
$\omega_{OA_z} = 8c^{-1}$, $R = 4$, $OA = 9\sqrt{2}$,
$AB = 8$, $BN = BC = 4$, $CD = 8$, α=45°

Задача К-26.52.



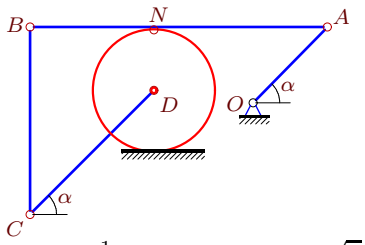
$\omega_{OA_z} = 1c^{-1}$, $R = 7$, $OA = 7\sqrt{2}$,
$AB = 8\sqrt{2}$, $AD = 14$, $\alpha = 45°$.

Задача К-26.53.



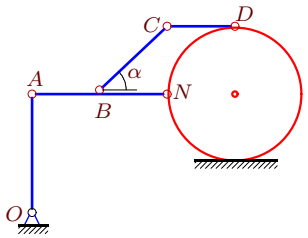
$\omega_{OA_z} = 10c^{-1}$, $R = 5$, $OA = 3$,
$AD = 5\sqrt{2}$, $BC = 8$, $\alpha = 45°$.

Задача К-26.54.



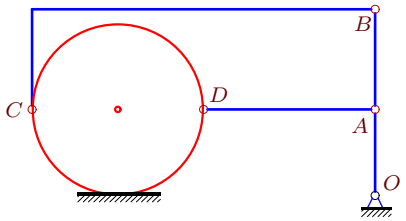
$\omega_{OA_z} = 35c^{-1}$, $R = 5$, $OA = 6\sqrt{2}$,
$CD = 10\sqrt{2}$, $AN = 14$, $AB = 24$, $\alpha = 45°$.

Задача К-26.55.



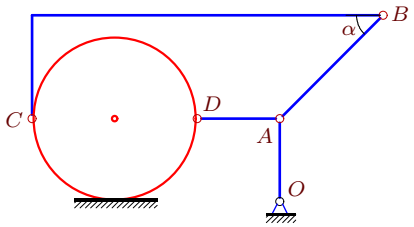
$\omega_{OA_z} = 8c^{-1}$, $R = 4$, $OA = 7$,
$AB = 4$, $BN = 4$, $BC = 4\sqrt{2}$, $CD = 4$, α=45°

Задача К-26.56.



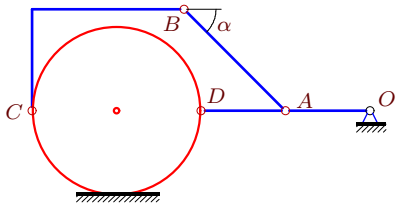
$\omega_{OA_z} = 4c^{-1}$, $R = 6$, $OA = 6$,
$AB = 7$, $AD = 12$.

Задача К-26.57.



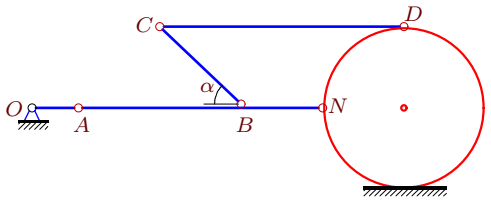
$\omega_{OA_z} = 3c^{-1}$, $R = 4$, $OA = 4$,
$AB = 5\sqrt{2}$, $AD = 4$, $\alpha = 45°$.

Задача К-26.58.



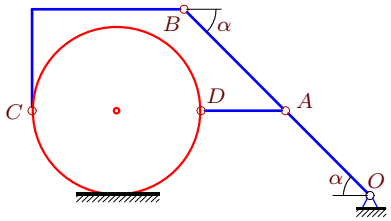
$\omega_{OA_z} = 3c^{-1}$, $R = 5$, $OA = 5$,
$AB = 6\sqrt{2}$, $AD = 5$, $\alpha = 45°$.

Задача К-26.59.



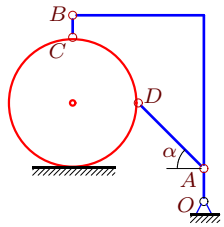
$\omega_{OA_z} = 63c^{-1}$, $R = 7$, $OA = 4$,
$AB = 14$, $BN = 7$, $BC = 7\sqrt{2}$, $CD = 21$, α=45°

Задача К-26.60.



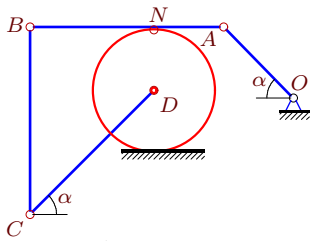
$\omega_{OA_z} = 1c^{-1}$, $R = 5$, $OA = 5\sqrt{2}$,
$AB = 6\sqrt{2}$, $AD = 5$, $\alpha = 45°$.

Задача К-26.61.



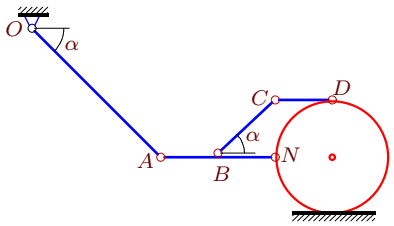
$\omega_{OA_z} = 4c^{-1}$, $R = 6$, $OA = 3$,
$AD = 6\sqrt{2}$, $BC = 2$, $\alpha = 45°$.

Задача К-26.62.



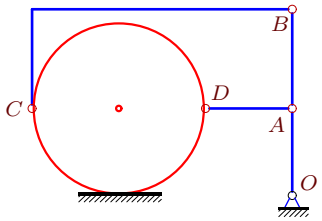
$\omega_{OA_z} = 48c^{-1}$, $R = 8$, $OA = 9\sqrt{2}$,
$CD = 16\sqrt{2}$, $AN = 9$, $AB = 25$, $\alpha = 45°$.

Задача К-26.63.



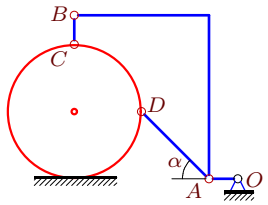
$\omega_{OA_z} = 4c^{-1}$, $R = 4$, $OA = 9\sqrt{2}$,
$AB = 4$, $BN = 4$, $BC = 4\sqrt{2}$, $CD = 4$, α=45°

Задача К-26.64.



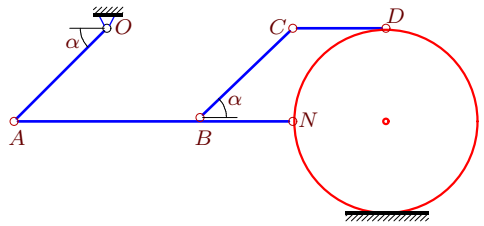
$\omega_{OA_z} = 3c^{-1}$, $R = 7$, $OA = 7$,
$AB = 8$, $AD = 7$.

Задача К-26.65.



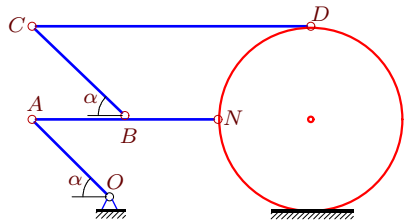
$\omega_{OA_z} = 14c^{-1}$, $R = 7$, $OA = 3$,
$AD = 7\sqrt{2}$, $BC = 3$, $\alpha = 45°$.

Задача К-26.66.



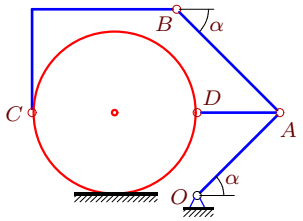
$\omega_{OA_z} = 3c^{-1}$, $R = 7$, $OA = 7\sqrt{2}$,
$AB = 14$, $BN = 7$, $BC = 7\sqrt{2}$, $CD = 7$, α=45°

Задача К-26.67.



$\omega_{OA_z} = 18c^{-1}$, $R = 6$, $OA = 5\sqrt{2}$,
$AB = 6$, $BN = 6$, $BC = 6\sqrt{2}$, $CD = 18$, α=45°

Задача К-26.68.



$\omega_{OA_z} = 3c^{-1}$, $R = 4$, $OA = 4\sqrt{2}$,
$AB = 5\sqrt{2}$, $AD = 4$, $\alpha = 45°$.

Ответы.

Кинематический анализ плоского механизма

16.05.2016

№	ω_{AB_z}	ω_{BC_z}	ω_{CD_z}	ω_{DA_z}	$\omega_{\text{диск}_z}$
35	-5	10	5	—	10
36	-1	-1	—	-3	0
37	-1	2	1	—	2
38	30	34	30	—	42
39	0	-3	-2	—	-3
40	1	1	—	-2	4
41	-5	-5	—	-5	-5
42	15	18	15	—	24
43	-21	63	35	—	63
44	1	1	—	-2	4
45	1	1	—	1	1
46	-30	-30	-27	—	-33
47	-6	0	-3	—	0
48	2	2	—	0	3
49	10	45	—	-30	30
50	-2	3	-2	—	3
51	0	-18	-9	—	-18
52	0	0	—	-1	1
53	-3	-3	—	-3	-3
54	15	17	15	—	21
55	-7	14	-7	—	14
56	1	1	—	-2	4
57	1	1	—	-3	3
58	-1	-1	—	-3	0
59	-12	0	-4	—	0
60	0	0	—	-2	1
61	0	0	—	-1	1
62	-48	-23	-48	—	27
63	0	-9	0	—	-9
64	1	1	—	-3	3
65	-3	-3	—	-3	-3
66	2	-3	2	—	-3
67	0	15	10	—	15
68	2	2	—	0	3

K-26 файл o26k18A