

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-26.1. *Акулина Даша*

$\omega_{OA_z} = 16c^{-1}$, $R = 4$, $OA = 3$,
 $AB = 4$, $BN = BC = 4$, $CD = 8$.

Задача К-26.2. *Анарбаев Б.*

$\omega_{OA_z} = 36c^{-1}$, $R = 6$, $OA = 7$,
 $CD = 12\sqrt{2}$, $AN = 9$, $AB = 21$, $\alpha = 45^\circ$.

Задача К-26.3. *Баранов Максим*

$\omega_{OA_z} = 55c^{-1}$, $R = 5$, $OA = 4\sqrt{2}$,
 $CD = 5\sqrt{2}$, $AN = 11$, $AB = 21$, $\alpha = 45^\circ$.

Задача К-26.4. *Бебирли Эмиль*

$\omega_{OA_z} = 20c^{-1}$, $R = 5$, $OA = 7$,
 $AB = 5$, $BN = BC = 5$, $CD = 10$.

Задача К-26.5. *Биль Евгений*

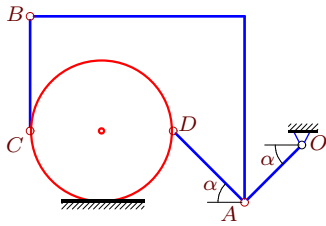
$\omega_{OA_z} = 44c^{-1}$, $R = 8$, $OA = 4\sqrt{2}$,
 $CD = 16\sqrt{2}$, $AN = 22$, $AB = 38$, $\alpha = 45^\circ$.

Задача К-26.6. *Волкобой Илья*

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

Задача К-26.7.

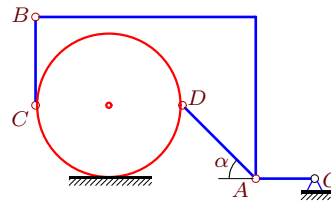
Глядяев А.Д.



$\omega_{OA_z} = 15c^{-1}$, $R = 5$, $OA = 4\sqrt{2}$,
 $AD = 5\sqrt{2}$, $BC = 8$, $\alpha = 45^\circ$.

Задача К-26.8.

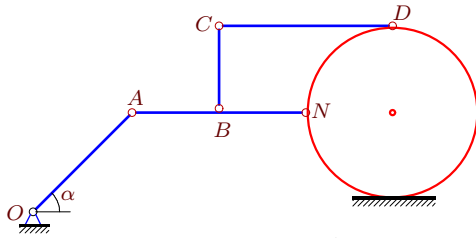
Горбатенко Егор



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

Задача К-26.9.

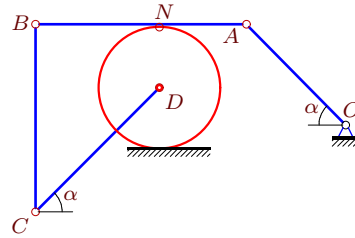
Губин Иван



$\omega_{OA_z} = 7c^{-1}$, $R = 7$, $OA = 8\sqrt{2}$,
 $AB = 7$, $BN = BC = 7$, $CD = 14$, $\alpha = 45^\circ$

Задача К-26.10.

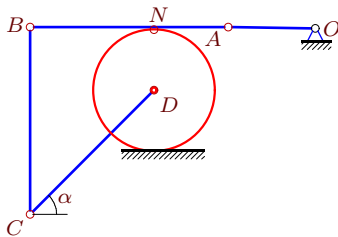
Драгин Егор



$\omega_{OA_z} = 105c^{-1}$, $R = 5$, $OA = 8\sqrt{2}$,
 $CD = 10\sqrt{2}$, $AN = 7$, $AB = 17$, $\alpha = 45^\circ$.

Задача К-26.11.

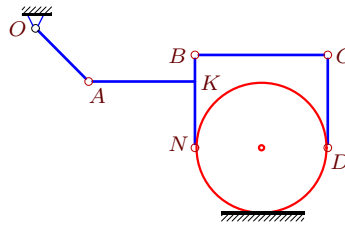
Исаков Александр



$\omega_{OA_z} = 18c^{-1}$, $R = 5$, $OA = 7$,
 $CD = 10\sqrt{2}$, $AN = 6$, $AB = 16$, $\alpha = 45^\circ$.

Задача К-26.12.

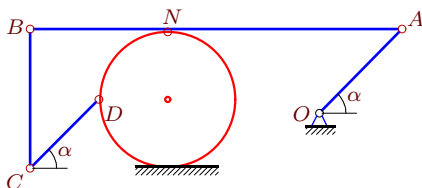
Картушин Александр



$\omega_{OA_z} = 5c^{-1}$, $R = 5$, $OA = 4\sqrt{2}$,
 $AK = 8$, $BK = 2$, $KN = 5$, $CD = 7$, $\alpha = 45^\circ$.

Задача К-26.13.

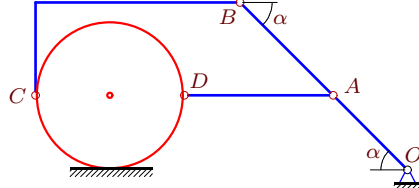
Костина Даша



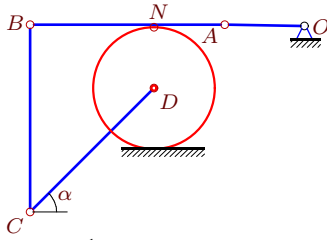
$\omega_{OA_z} = 85c^{-1}$, $R = 5$, $OA = 6\sqrt{2}$,
 $CD = 5\sqrt{2}$, $AN = 17$, $AB = 27$, $\alpha = 45^\circ$.

Задача К-26.14.

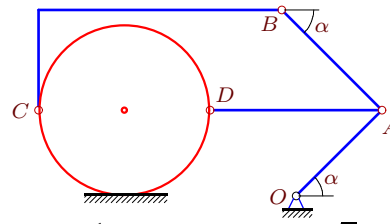
Лбова Александра



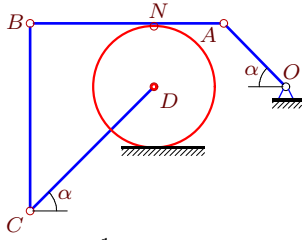
$\omega_{OA_z} = 1c^{-1}$, $R = 4$, $OA = 4\sqrt{2}$,
 $AB = 5\sqrt{2}$, $AD = 8$, $\alpha = 45^\circ$.

Задача К-26.15.*Муржи Николай*

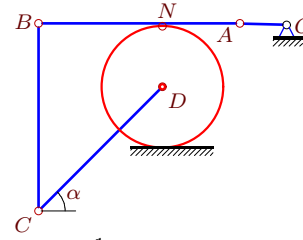
$$\omega_{OA_z} = 8c^{-1}, R = 7, OA = 9, \\ CD = 14\sqrt{2}, AN = 8, AB = 22, \alpha = 45^\circ.$$

Задача К-26.16.*Никитенков Федор*

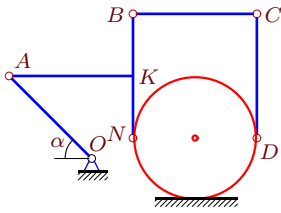
$$\omega_{OA_z} = 2c^{-1}, R = 6, OA = 6\sqrt{2}, \\ AB = 7\sqrt{2}, AD = 12, \alpha = 45^\circ.$$

Задача К-26.17.*Новиков Павел*

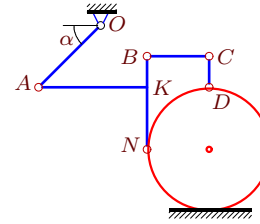
$$\omega_{OA_z} = 54c^{-1}, R = 8, OA = 8\sqrt{2}, \\ CD = 16\sqrt{2}, AN = 9, AB = 25, \alpha = 45^\circ.$$

Задача К-26.18.*Опитев Владислав*

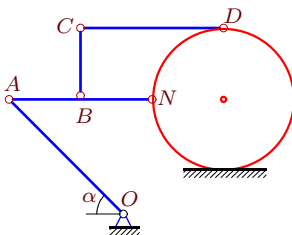
$$\omega_{OA_z} = 5c^{-1}, R = 8, OA = 6, \\ CD = 16\sqrt{2}, AN = 10, AB = 26, \alpha = 45^\circ.$$

Задача К-26.19.*Оришак Сергей*

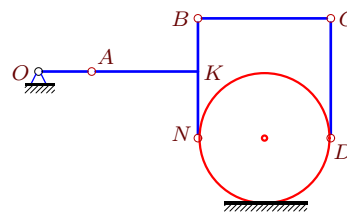
$$\omega_{OA_z} = 3c^{-1}, R = 3, OA = 4\sqrt{2}, \\ AK = 6, BK = 3, KN = 3, CD = 6, \alpha = 45^\circ.$$

Задача К-26.20.*Парашин Андрей*

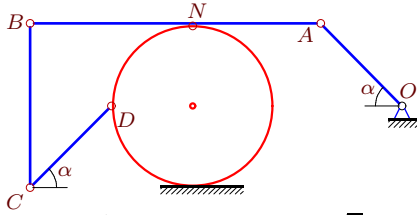
$$\omega_{OA_z} = 3c^{-1}, R = 4, OA = 4\sqrt{2}, \\ AK = 7, BK = 2, KN = 4, CD = 2, \alpha = 45^\circ.$$

Задача К-26.21.*Парохин Антон*

$$\omega_{OA_z} = 5c^{-1}, R = 5, OA = 8\sqrt{2}, \\ AB = 5, BN = BC = 5, CD = 10, \alpha = 45^\circ.$$

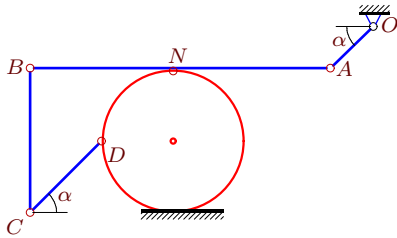
Задача К-26.22.*Пархоменко Иван*

$$\omega_{OA_z} = 3c^{-1}, R = 5, OA = 4, \\ AK = 8, BK = 4, KN = 5, CD = 9.$$

Задача К-26.23.*Петров Кирилл*

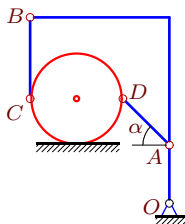
$$\omega_{OA_z} = 22c^{-1}, R = 7, OA = 7\sqrt{2},$$

$$CD = 7\sqrt{2}, AN = 11, AB = 25, \alpha = 45^\circ.$$

Задача К-26.25.*Руфин Никита*

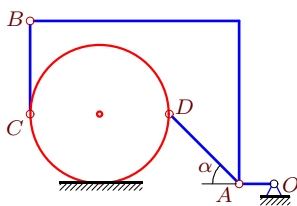
$$\omega_{OA_z} = 110c^{-1}, R = 5, OA = 3\sqrt{2},$$

$$CD = 5\sqrt{2}, AN = 11, AB = 21, \alpha = 45^\circ.$$

Задача К-26.27.*Семенова Ирина*

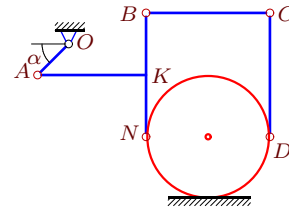
$$\omega_{OA_z} = 168c^{-1}, R = 4, OA = 5,$$

$$AD = 4\sqrt{2}, BC = 7, \alpha = 45^\circ.$$

Задача К-26.29.*Сюлюкин Кирилл*

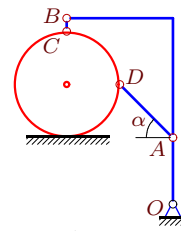
$$\omega_{OA_z} = 4c^{-1}, R = 6, OA = 3,$$

$$AD = 6\sqrt{2}, BC = 8, \alpha = 45^\circ.$$

Задача К-26.24.*Петухов Антон*

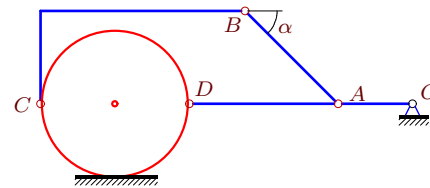
$$\omega_{OA_z} = 6c^{-1}, R = 4, OA = 2\sqrt{2},$$

$$AK = 7, BK = 4, KN = 4, CD = 8, \alpha = 45^\circ.$$

Задача К-26.26.*Самойлов Никита*

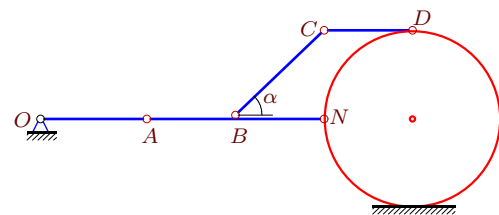
$$\omega_{OA_z} = 8c^{-1}, R = 4, OA = 5,$$

$$AD = 4\sqrt{2}, BC = 1, \alpha = 45^\circ.$$

Задача К-26.28.*Слявин Ярослав*

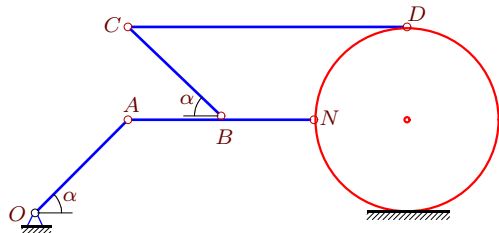
$$\omega_{OA_z} = 4c^{-1}, R = 4, OA = 4,$$

$$AB = 5\sqrt{2}, AD = 8, \alpha = 45^\circ.$$

Задача К-26.30.*Хачалов Магомед*

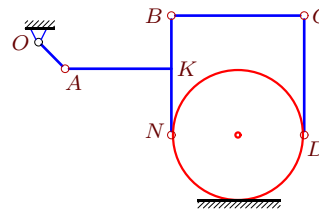
$$\omega_{OA_z} = 5c^{-1}, R = 5, OA = 6,$$

$$AB = 5, BN = 5, BC = 5\sqrt{2}, CD = 5, \alpha = 45^\circ.$$

Задача К-26.31.*Чаймелов Андрей*

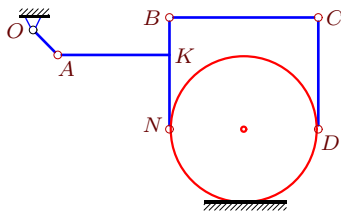
$$\omega_{OA_z} = 3c^{-1}, R = 5, OA = 5\sqrt{2},$$

$$AB = 5, BN = 5, BC = 5\sqrt{2}, CD = 15, \alpha = 45^\circ$$

Задача К-26.32.*Чумаков Иван*

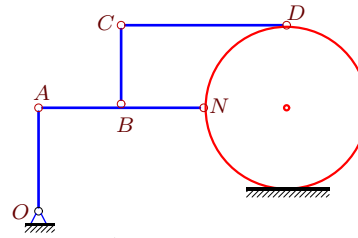
$$\omega_{OA_z} = 5c^{-1}, R = 5, OA = 2\sqrt{2},$$

$$AK = 8, BK = 4, KN = 5, CD = 9, \alpha = 45^\circ.$$

Задача К-26.33.*Шубин Станислав*

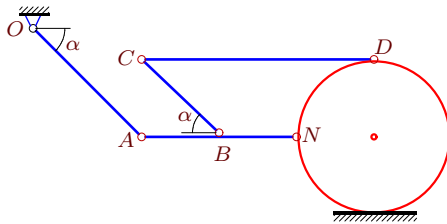
$$\omega_{OA_z} = 3c^{-1}, R = 6, OA = 2\sqrt{2},$$

$$AK = 9, BK = 3, KN = 6, CD = 9, \alpha = 45^\circ.$$

Задача К-26.34.*Юшин Илья*

$$\omega_{OA_z} = 16c^{-1}, R = 4, OA = 5,$$

$$AB = 4, BN = BC = 4, CD = 8.$$

Задача К-26.35.*Ярилин Иван*

$$\omega_{OA_z} = 15c^{-1}, R = 5, OA = 7\sqrt{2},$$

$$AB = 5, BN = 5, BC = 5\sqrt{2}, CD = 15, \alpha = 45^\circ$$