

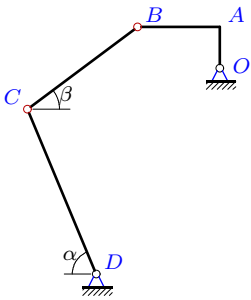
Скорости точек простого механизма (3 звена).

В указанном положении механизма задана угловая скорость одного из его звеньев (с^{-1}). Звенья, направление которых не указано, принимать вертикальными или горизонтальными. Радиус цилиндра R . Размеры даны в метрах. Найти угловые скорости звеньев и скорости точек A , B и C .

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

Задача К-17.1.

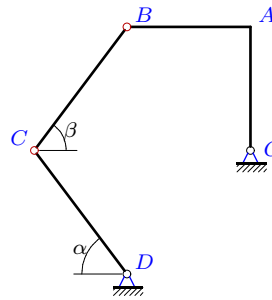
Акулина Даша



$\omega_{OA_z} = 42$, $OA = 3$, $AB = 6$, $OA \perp AB$,
 $BC = 10$, $DC = 13$, $\text{tg } \beta = 3/4$, $\text{tg } \alpha = 12/5$

Задача К-17.2.

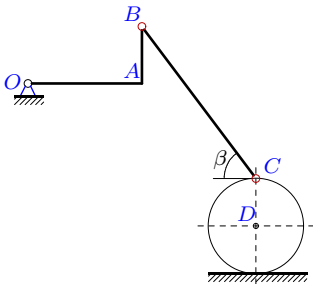
Анарбаев Б.



$\omega_{DC_z} = 7$, $OA = AB = 4$, $OA \perp AB$,
 $BC = DC = 5$, $\text{tg } \alpha = \text{tg } \beta = 4/3$

Задача К-17.3.

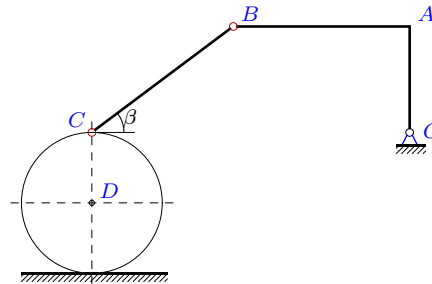
Баранов Максим



$\omega_{BC_z} = -5$, $OA = 6$, $AB = 3$, $OA \perp AB$,
 $BC = 10$, $R = 2.5$, $\text{tg } \beta = 4/3$.

Задача К-17.4.

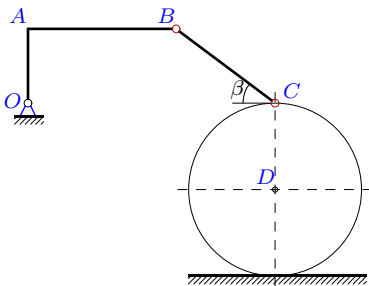
Бибирли Эмиль



$\omega_{DC_z} = 27$, $OA = 3$, $AB = 5$, $OA \perp AB$,
 $BC = 5$, $R = 2$, $\text{tg } \beta = 3/4$.

Задача К-17.5.

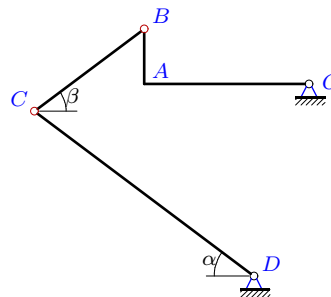
Биль Евгений



$\omega_{OA_z} = 14$, $OA = 3$, $AB = 6$, $OA \perp AB$,
 $BC = 5$, $R = 3.5$, $\text{tg } \beta = 3/4$.

Задача К-17.6.

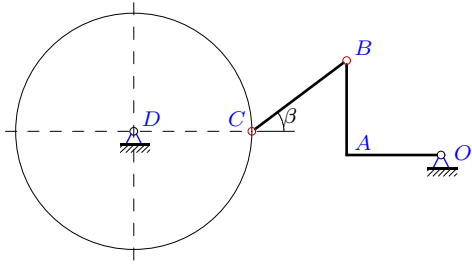
Волкобой Илья



$\omega_{DC_z} = 13$, $OA = 6$, $AB = 2$, $OA \perp AB$,
 $BC = 5$, $DC = 10$, $\text{tg } \alpha = \text{tg } \beta = 3/4$

Задача К-17.7.

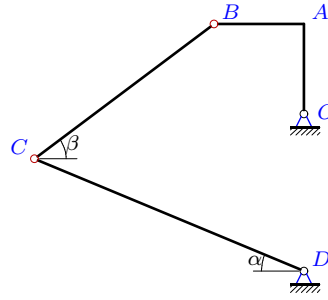
Глядяев А.Д.



$\omega_{OA_z} = -15$, $OA = AB = 4$, $OA \perp AB$,
 $BC = R = 5$, $\operatorname{tg} \beta = 3/4$.

Задача К-17.8.

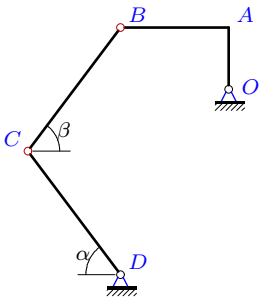
Горбатенко Егор



$\omega_{BC_z} = 1$, $OA = AB = 4$, $OA \perp AB$,
 $BC = 10$, $DC = 13$, $\operatorname{tg} \beta = 3/4$, $\operatorname{tg} \alpha = 5/12$

Задача К-17.9.

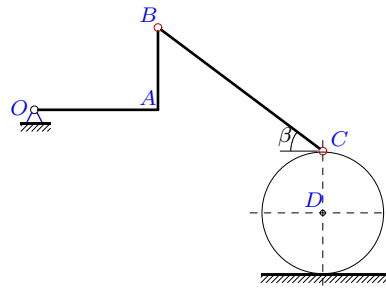
Губин Иван



$\omega_{DC_z} = 5$, $OA = 4$, $AB = 7$, $OA \perp AB$,
 $BC = DC = 10$, $\operatorname{tg} \alpha = \operatorname{tg} \beta = 4/3$

Задача К-17.10.

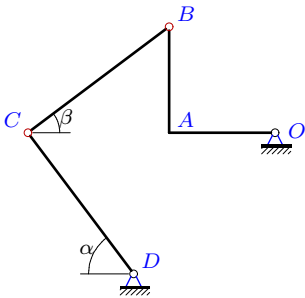
Драгин Егор



$\omega_{DC_z} = 17$, $OA = 3$, $AB = 2$, $OA \perp AB$,
 $BC = 5$, $R = 1.5$, $\operatorname{tg} \beta = 3/4$.

Задача К-17.11.

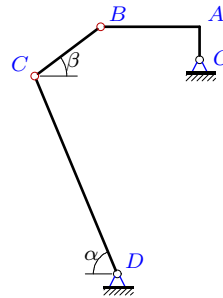
Исаков Александр



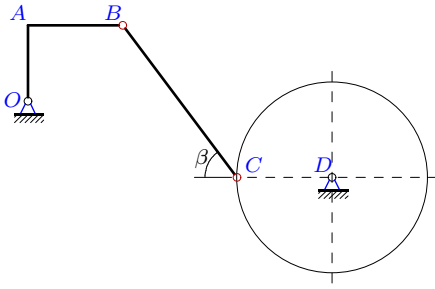
$\omega_{DC_z} = 21$, $OA = AB = 3$, $OA \perp AB$,
 $BC = DC = 5$, $\operatorname{tg} \beta = 3/4$, $\operatorname{tg} \alpha = 4/3$

Задача К-17.12.

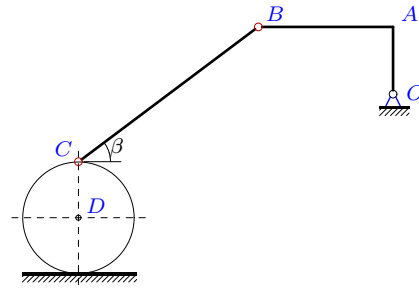
Картушин Александр



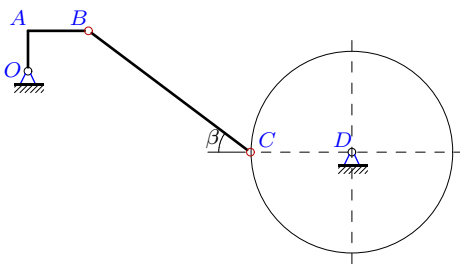
$\omega_{OA_z} = 63$, $OA = 2$, $AB = 6$, $OA \perp AB$,
 $BC = 5$, $DC = 13$, $\operatorname{tg} \beta = 3/4$, $\operatorname{tg} \alpha = 12/5$

Задача К-17.13.*Костина Даша*

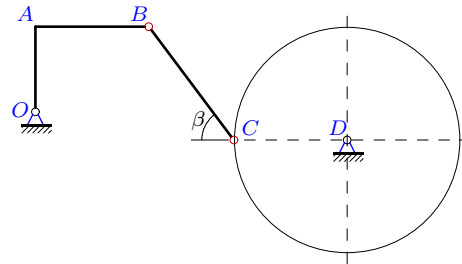
$$\omega_{DC_z} = 16, OA = 4, AB = 5, OA \perp AB, BC = 10, R = 5, \operatorname{tg} \beta = 4/3.$$

Задача К-17.14.*Лбова Александра*

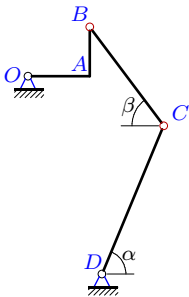
$$\omega_{OA_z} = 4, OA = 3, AB = 6, OA \perp AB, BC = 10, R = 2.5, \operatorname{tg} \beta = 3/4.$$

Задача К-17.15.*Муржи Николай*

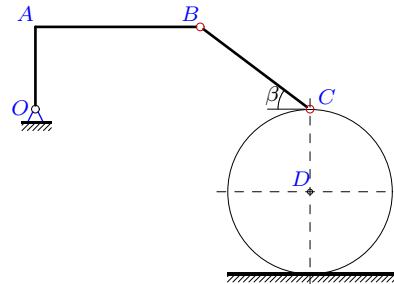
$$\omega_{OA_z} = -15, OA = 2, AB = 3, OA \perp AB, BC = 10, R = 5, \operatorname{tg} \beta = 3/4.$$

Задача К-17.16.*Никитенков Федор*

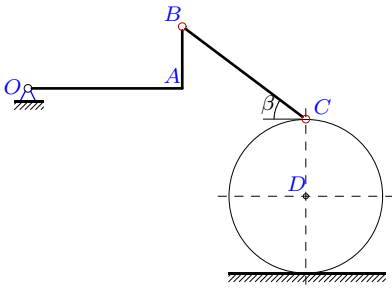
$$\omega_{BC_z} = -12, OA = 3, AB = 4, OA \perp AB, BC = 5, R = 4, \operatorname{tg} \beta = 4/3.$$

Задача К-17.17.*Новиков Павел*

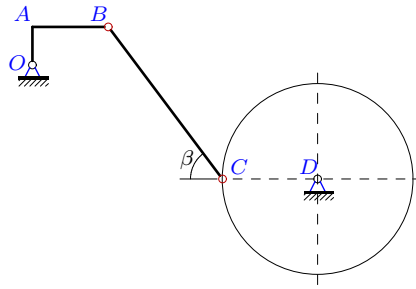
$$\omega_{OA_z} = 14, OA = 5, AB = 4, OA \perp AB, BC = 10, DC = 13, \operatorname{tg} \beta = 4/3, \operatorname{tg} \alpha = 12/5$$

Задача К-17.18.*Опитев Владислав*

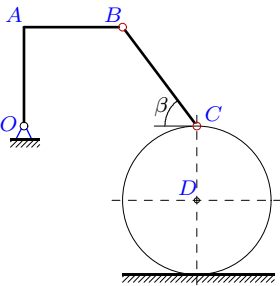
$$\omega_{DC_z} = 5, OA = 3, AB = 6, OA \perp AB, BC = 5, R = 3, \operatorname{tg} \beta = 3/4.$$

Задача К-17.19.*Оршак Сергей*

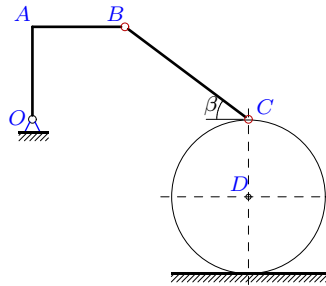
$$\omega_{OA_z} = 20, OA = 5, AB = 2, OA \perp AB, \\ BC = 2R = 5, \operatorname{tg} \beta = 3/4.$$

Задача К-17.20.*Парашин Андрей*

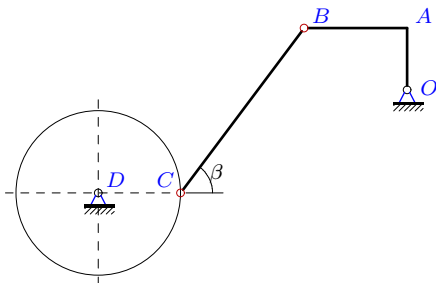
$$\omega_{BC_z} = -5, OA = 2, AB = 4, OA \perp AB, \\ BC = 10, R = 5, \operatorname{tg} \beta = 4/3.$$

Задача К-17.21.*Парохин Антон*

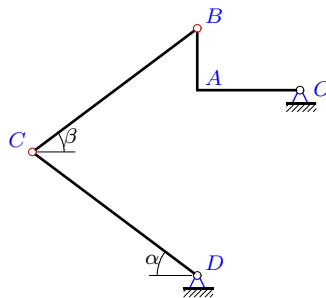
$$\omega_{OA_z} = 9, OA = AB = 4, OA \perp AB, \\ BC = 5, R = 3, \operatorname{tg} \beta = 4/3.$$

Задача К-17.22.*Пархоменко Иван*

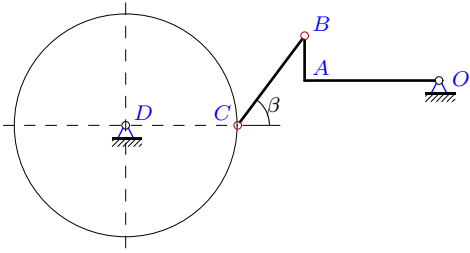
$$\omega_{OA_z} = 20, OA = AB = 3, OA \perp AB, \\ BC = 2R = 5, \operatorname{tg} \beta = 3/4.$$

Задача К-17.23.*Петров Кирилл*

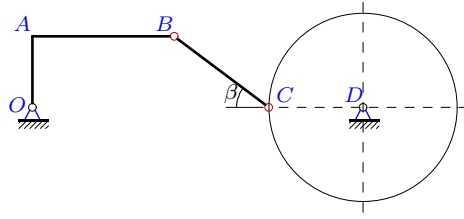
$$\omega_{BC_z} = -6, OA = 3, AB = 5, OA \perp AB, \\ BC = 10, R = 4, \operatorname{tg} \beta = 4/3.$$

Задача К-17.24.*Петухов Антон*

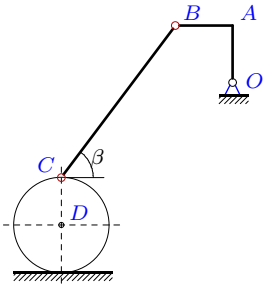
$$\omega_{DC_z} = 9, OA = 5, AB = 3, OA \perp AB, \\ BC = DC = 10, \operatorname{tg} \alpha = \operatorname{tg} \beta = 3/4$$

Задача К-17.25.*Руфин Никита*

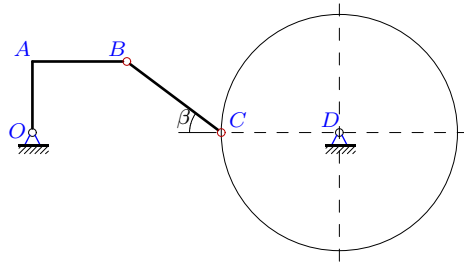
$$\omega_{BCz} = -1, OA = 6, AB = 2, OA \perp AB, \\ BC = R = 5, \operatorname{tg} \beta = 4/3.$$

Задача К-17.26.*Самойлов Никита*

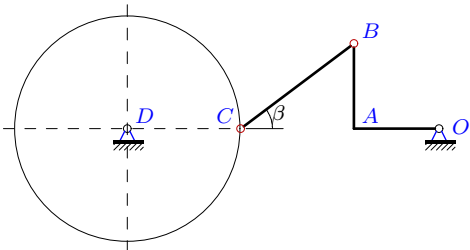
$$\omega_{OA_z} = -2, OA = 3, AB = 6, OA \perp AB, \\ BC = 5, R = 4, \operatorname{tg} \beta = 3/4.$$

Задача К-17.27.*Семенова Ирина*

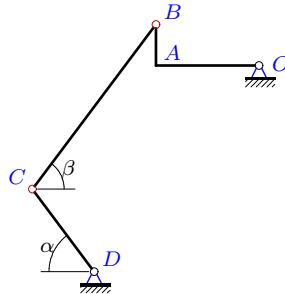
$$\omega_{OA_z} = 10, OA = AB = 3, OA \perp AB, \\ BC = 10, R = 2.5, \operatorname{tg} \beta = 4/3.$$

Задача К-17.28.*Слявин Ярослав*

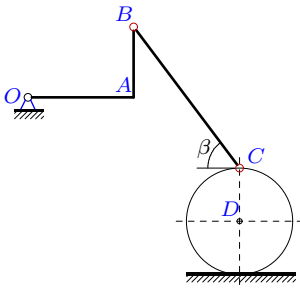
$$\omega_{BCz} = -5, OA = 3, AB = 4, OA \perp AB, \\ BC = R = 5, \operatorname{tg} \beta = 3/4.$$

Задача К-17.29.*Сюлюкин Кирилл*

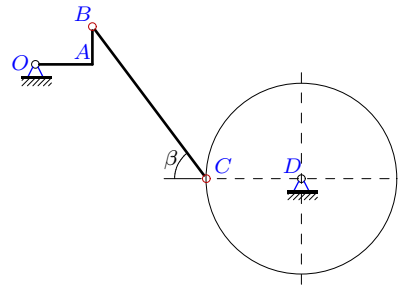
$$\omega_{DC_z} = 7, OA = AB = 3, OA \perp AB, \\ BC = 5, R = 4, \operatorname{tg} \beta = 3/4.$$

Задача К-17.30.*Хачалов Магомед*

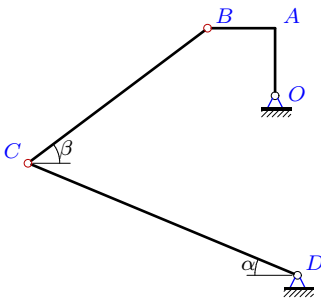
$$\omega_{DC_z} = 26, OA = 5, AB = 2, OA \perp AB, \\ BC = 10, DC = 5, \operatorname{tg} \alpha = \operatorname{tg} \beta = 4/3$$

Задача К-17.31.*Чаймелов Андрей*

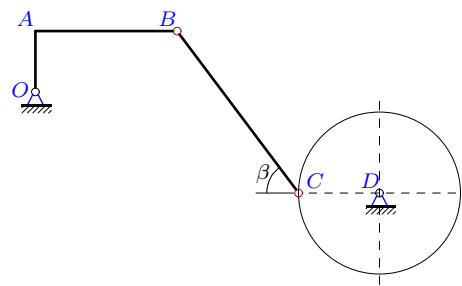
$\omega_{OA_z} = 1$, $OA = 6$, $AB = 4$, $OA \perp AB$,
 $BC = 10$, $R = 3$, $\operatorname{tg} \beta = 4/3$.

Задача К-17.32.*Чумаков Иван*

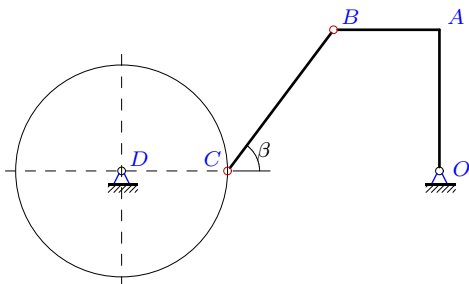
$\omega_{BC_z} = -5$, $OA = 3$, $AB = 2$, $OA \perp AB$,
 $BC = 10$, $R = 5$, $\operatorname{tg} \beta = 4/3$.

Задача К-17.33.*Шубин Станислав*

$\omega_{BC_z} = 3$, $OA = AB = 3$, $OA \perp AB$,
 $BC = 10$, $DC = 13$, $\operatorname{tg} \beta = 3/4$, $\operatorname{tg} \alpha = 5/12$

Задача К-17.34.*Юшин Илья*

$\omega_{DC_z} = 37$, $OA = 3$, $AB = 7$, $OA \perp AB$,
 $BC = 10$, $R = 4$, $\operatorname{tg} \beta = 4/3$.

Задача К-17.35.*Ярилин Иван*

$\omega_{DC_z} = 2$, $OA = 4$, $AB = 3$, $OA \perp AB$,
 $BC = 5$, $R = 3$, $\operatorname{tg} \beta = 4/3$.