

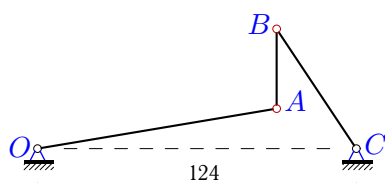
Уравнение трех угловых скоростей

Подобрать длины звеньев (в сантиметрах) шарнирного четырехзвенника так, чтобы в некоторый момент движения угловые скорости его звеньев были бы равны заданным. Положение опорных шарниров четырехзвенника известно. Расстояния даны в сантиметрах, угловые скорости — в рад/с.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.— М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.179.)

Задача K18.1.

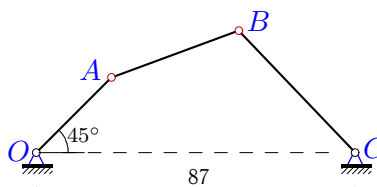
1



$$\omega_{OA} = -1, \\ \omega_{AB} = 5, \omega_{BC} = 3, AB \perp OC, AB = 31.$$

Задача K18.2.

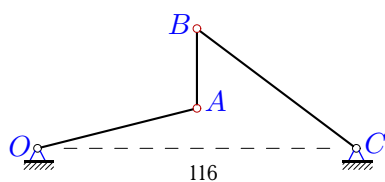
1



$$\omega_{OA} = 2, \\ \omega_{AB} = -1.7, \omega_{BC} = 0.6, OA = 29.$$

Задача K18.3.

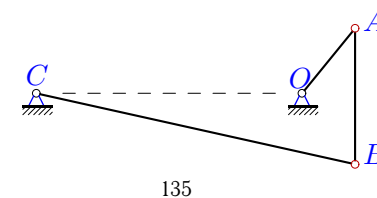
1



$$\omega_{OA} = 2, \\ \omega_{AB} = -4, \omega_{BC} = -2, AB \perp OC, AB = 29.$$

Задача K18.4.

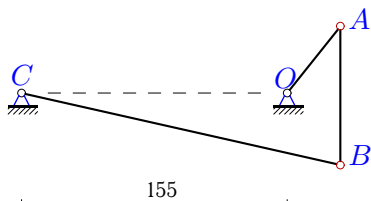
1



$$\omega_{OA} = 1, \\ \omega_{AB} = 0.6, \omega_{BC} = 0.2, AB \perp OC, AB = 69.$$

Задача K18.5.

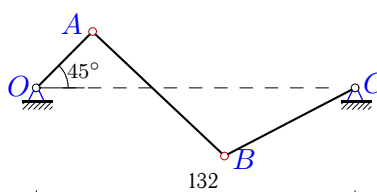
1



$$\omega_{OA} = 18, \\ \omega_{AB} = 10, \omega_{BC} = 3, AB \perp OC, AB = 81.$$

Задача K18.6.

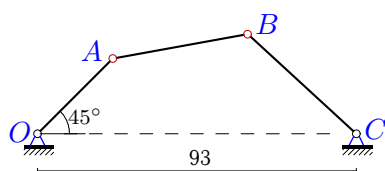
1



$$\omega_{OA} = 4, \\ \omega_{AB} = 0.6, \omega_{BC} = -2, OA = 33.$$

Задача K18.7.

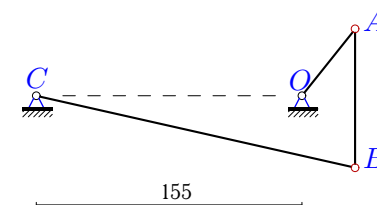
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$$\omega_{OA} = 3, \\ \omega_{AB} = -3, \omega_{BC} = 1.5, OA = 31.$$

Задача K18.8.

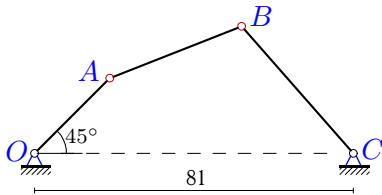
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$$\omega_{OA} = 18, \\ \omega_{AB} = 10, \omega_{BC} = 3, AB \perp OC, AB = 81.$$

Задача K18.9.

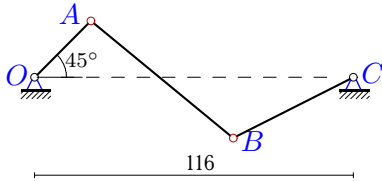
1



$\omega_{OA}=1,$
 $\omega_{AB}=-0.8, \omega_{BC}=0.3, OA=27.$

Задача K18.11.

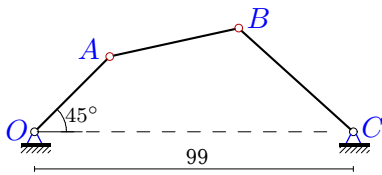
1



$\omega_{OA}=2,$
 $\omega_{AB}=0.3, \omega_{BC}=-1.3, OA=29.$

Задача K18.13.

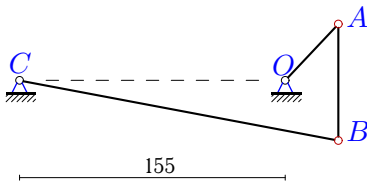
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$\omega_{OA}=4,$
 $\omega_{AB}=-4, \omega_{BC}=1.8, OA=33.$

Задача K18.15.

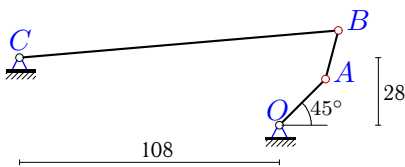
1



$\omega_{OA}=3,$
 $\omega_{AB}=1.7, \omega_{BC}=0.5, AB \perp OC, AB=68.$

Задача K18.17.

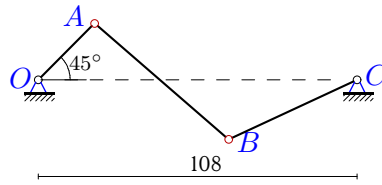
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$\omega_{OA}=1,$
 $\omega_{AB}=-0.9, \omega_{BC}=0.1, OA=27.$

Задача K18.10.

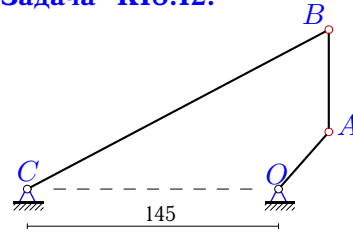
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$\omega_{OA}=1,$
 $\omega_{AB}=0.2, \omega_{BC}=-0.6, OA=27.$

Задача K18.12.

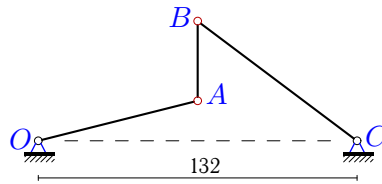
1



$\omega_{OA}=2,$
 $\omega_{AB}=-0.6, \omega_{BC}=0.3, AB \perp OC, AB=59.$

Задача K18.14.

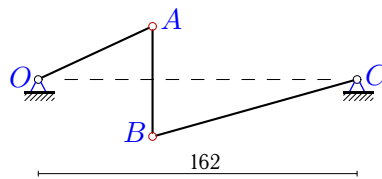
1



$\omega_{OA}=4,$
 $\omega_{AB}=-8, \omega_{BC}=-4, AB \perp OC, AB=33.$

Задача K18.16.

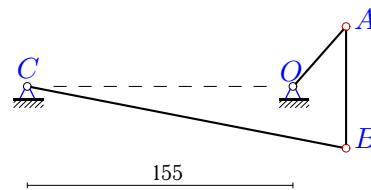
1



$\omega_{OA}=1,$
 $\omega_{AB}=0.2, \omega_{BC}=-0.6, AB \perp OC, AB=56.$

Задача K18.18.

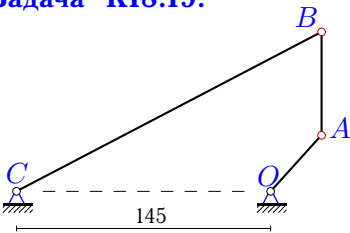
1



$\omega_{OA}=18,$
 $\omega_{AB}=10, \omega_{BC}=3, AB \perp OC, AB=71.$

Задача K18.19.

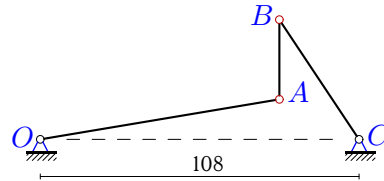
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$\omega_{OA}=2,$
 $\omega_{AB}=-0.6, \omega_{BC}=0.3, AB \perp OC, AB = 59.$

Задача K18.20.

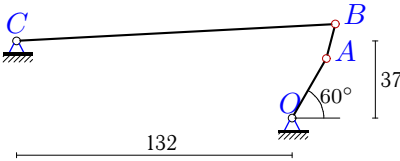
1



$\omega_{OA}=-0.3,$
 $\omega_{AB}=1.7, \omega_{BC}=1, AB \perp OC, AB = 27.$

Задача K18.21.

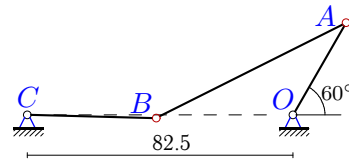
1



$\omega_{OA}=67,$
 $\omega_{AB}=-114, \omega_{BC}=4, OA = 33.$

Задача K18.22.

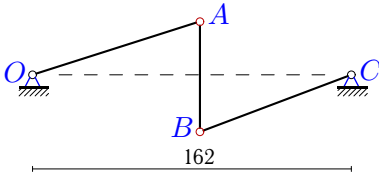
1



$\omega_{OA}=-4,$
 $\omega_{AB}=-4, \omega_{BC}=4, OA = 33.$

Задача K18.23.

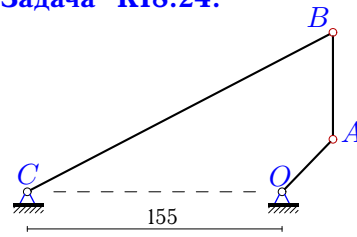
1



$\omega_{OA}=-0.9,$
 $\omega_{AB}=0.1, \omega_{BC}=1, AB \perp OC, AB = 56.$

Задача K18.24.

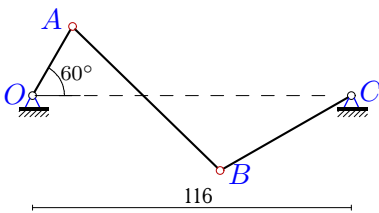
1



$\omega_{OA}=3,$
 $\omega_{AB}=-0.7, \omega_{BC}=0.5, AB \perp OC, AB = 65.$

Задача K18.25.

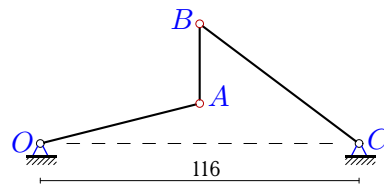
1



$\omega_{OA}=-4,$
 $\omega_{AB}=-0.8, \omega_{BC}=2, OA = 29.$

Задача K18.26.

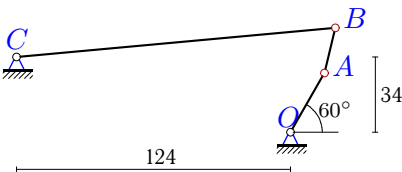
1



$\omega_{OA}=2,$
 $\omega_{AB}=-4, \omega_{BC}=-2, AB \perp OC, AB = 29.$

Задача K18.27.

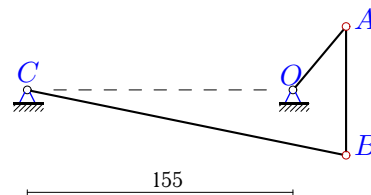
1



$\omega_{OA}=47,$
 $\omega_{AB}=-59, \omega_{BC}=3, OA = 31.$

Задача K18.28.

1



$\omega_{OA}=3,$
 $\omega_{AB}=1.7, \omega_{BC}=0.5, AB \perp OC, AB = 75.$

K18 Ответы.
Уравнение трех угловых скоростей

08.04.2012

| № | <i>OA</i> | <i>AB</i> | <i>BC</i> |
|----|-----------|-----------|-----------|
| 1 | 94.283 | 31.000 | 55.886 |
| 2 | 29.000 | 37.326 | 45.485 |
| 3 | 59.785 | 29.000 | 72.500 |
| 4 | 48.263 | 69.000 | 172.241 |
| 5 | 48.886 | 81.000 | 190.951 |
| 6 | 33.000 | 71.931 | 68.185 |
| 7 | 31.000 | 38.997 | 43.912 |
| 8 | 48.886 | 81.000 | 190.951 |
| 9 | 27.000 | 36.332 | 41.732 |
| 10 | 27.000 | 57.369 | 49.889 |
| 11 | 29.000 | 66.994 | 48.685 |
| 12 | 40.378 | 59.000 | 192.984 |
| 13 | 33.000 | 40.553 | 48.357 |
| 14 | 68.031 | 33.000 | 82.500 |
| 15 | 45.015 | 68.000 | 189.331 |
| 16 | 66.892 | 56.000 | 105.050 |
| 17 | 27.000 | 20.977 | 133.933 |
| 18 | 45.374 | 71.000 | 189.815 |
| 19 | 40.378 | 59.000 | 192.984 |
| 20 | 84.339 | 27.000 | 48.442 |
| 21 | 33.000 | 17.072 | 153.049 |
| 22 | 33.000 | 64.435 | 41.250 |
| 23 | 89.294 | 56.000 | 82.202 |
| 24 | 43.982 | 65.000 | 209.405 |
| 25 | 29.000 | 74.686 | 57.405 |
| 26 | 59.785 | 29.000 | 72.500 |
| 27 | 31.000 | 21.293 | 145.133 |
| 28 | 47.508 | 75.000 | 190.045 |

K18 файл o18k1A