

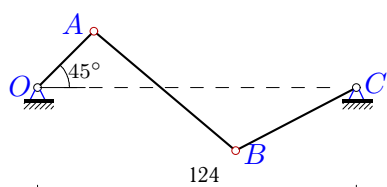
## Уравнение трех угловых скоростей

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.

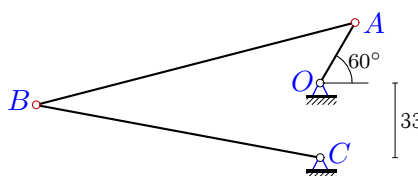
5



$$\omega_{OA}=3, \\ \omega_{AB}=0.4, \omega_{BC}=-1.9, OA=31.$$

### Задача K18.2.

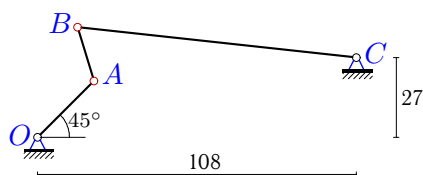
5



$$\omega_{OA}=7, \\ \omega_{AB}=6, \omega_{BC}=3, OA=31.$$

### Задача K18.3.

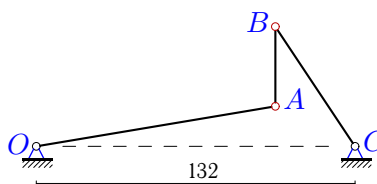
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$$\omega_{OA}=1, \\ \omega_{AB}=-1.2, \omega_{BC}=-0.3, OA=27.$$

### Задача K18.4.

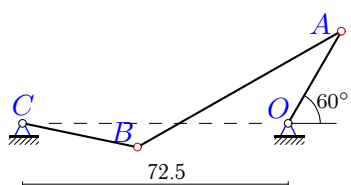
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$$\omega_{OA}=-1.3, \\ \omega_{AB}=7, \omega_{BC}=4, AB \perp OC, AB=33.$$

### Задача K18.5.

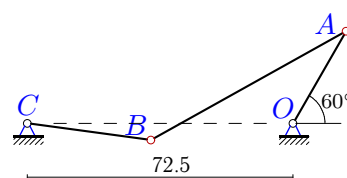
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$$\omega_{OA}=-3, \\ \omega_{AB}=-1.9, \omega_{BC}=2, OA=29.$$

### Задача K18.6.

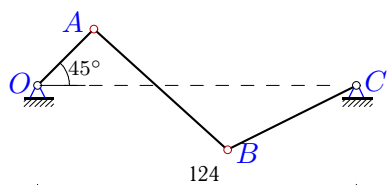
5



$$\omega_{OA}=-3, \\ \omega_{AB}=-2, \omega_{BC}=2, OA=29.$$

### Задача K18.7.

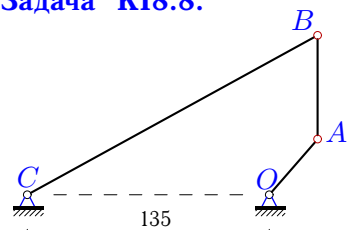
5



$$\omega_{OA}=3, \\ \omega_{AB}=0.5, \omega_{BC}=-1.8, OA=31.$$

### Задача K18.8.

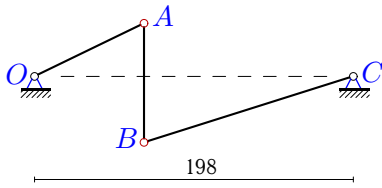
5



$$\omega_{OA}=6, \\ \omega_{AB}=-1.7, \omega_{BC}=1, AB \perp OC, AB=58.$$

**Задача K18.9.**

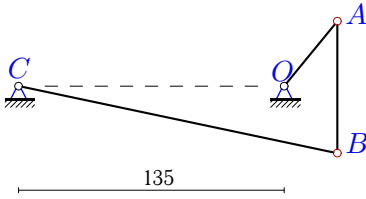
5



$\omega_{OA}=4,$   
 $\omega_{AB}=0.6, \omega_{BC}=-2, AB \perp OC, AB = 74.$

**Задача K18.11.**

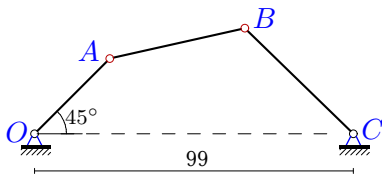
5



$\omega_{OA}=6,$   
 $\omega_{AB}=3, \omega_{BC}=1, AB \perp OC, AB = 67.$

**Задача K18.13.**

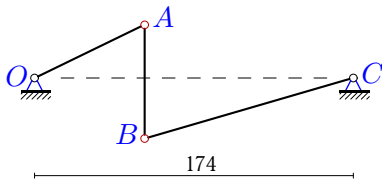
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$\omega_{OA}=4,$   
 $\omega_{AB}=-4, \omega_{BC}=1.8, OA = 33.$

**Задача K18.15.**

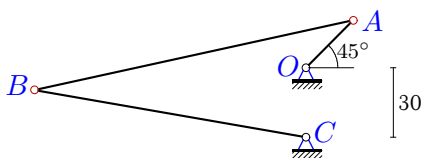
5



$\omega_{OA}=2,$   
 $\omega_{AB}=0.4, \omega_{BC}=-1.1, AB \perp OC, AB = 62.$

**Задача K18.17.**

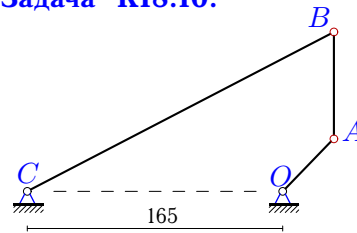
5



$\omega_{OA}=2,$   
 $\omega_{AB}=0.9, \omega_{BC}=0.7, OA = 29.$

**Задача K18.10.**

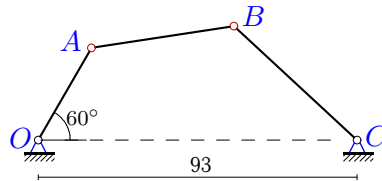
5



$\omega_{OA}=4,$   
 $\omega_{AB}=-1, \omega_{BC}=0.7, AB \perp OC, AB = 69.$

**Задача K18.12.**

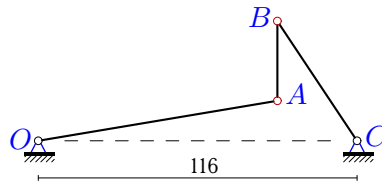
5



$\omega_{OA}=5,$   
 $\omega_{AB}=-4, \omega_{BC}=3, OA = 31.$

**Задача K18.14.**

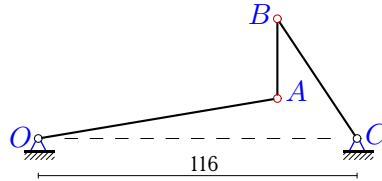
5



$\omega_{OA}=-0.7,$   
 $\omega_{AB}=3, \omega_{BC}=2, AB \perp OC, AB = 29.$

**Задача K18.16.**

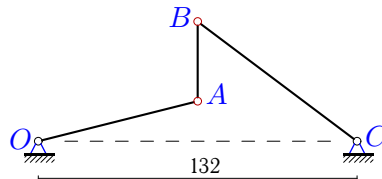
5



$\omega_{OA}=-0.7,$   
 $\omega_{AB}=3, \omega_{BC}=2, AB \perp OC, AB = 29.$

**Задача K18.18.**

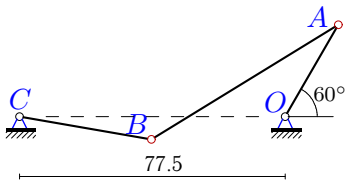
5



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

**Задача K18.19.**

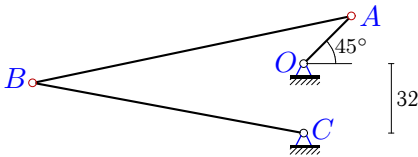
5



$\omega_{OA} = -5,$   
 $\omega_{AB} = -4, \omega_{BC} = 3, OA = 31.$

**Задача K18.21.**

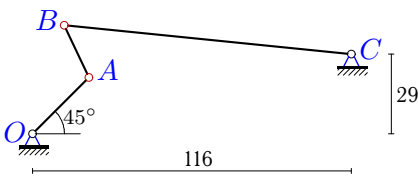
5



$\omega_{OA} = 3,$   
 $\omega_{AB} = 1.3, \omega_{BC} = 1.1, OA = 31.$

**Задача K18.23.**

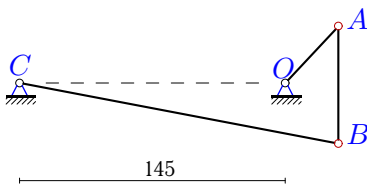
5



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

**Задача K18.25.**

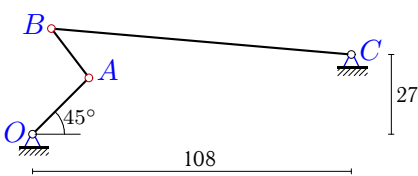
5



$\omega_{OA} = 12,$   
 $\omega_{AB} = 7, \omega_{BC} = 2, AB \perp OC, AB = 64.$

**Задача K18.27.**

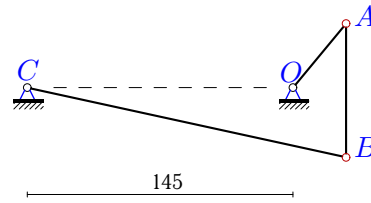
5



$\omega_{OA} = 1,$   
 $\omega_{AB} = -1.3, \omega_{BC} = -0.4, OA = 27.$

**Задача K18.20.**

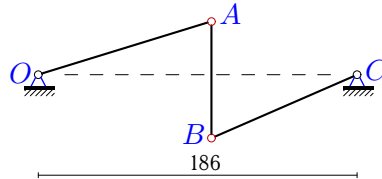
5



$\omega_{OA} = 2,$   
 $\omega_{AB} = 1.1, \omega_{BC} = 0.3, AB \perp OC, AB = 73.$

**Задача K18.22.**

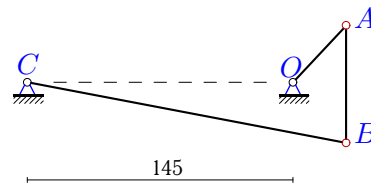
5



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

**Задача K18.24.**

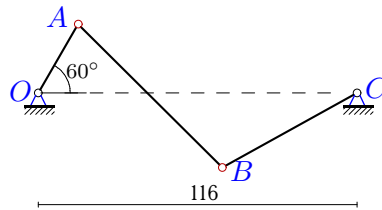
5



$\omega_{OA} = 2,$   
 $\omega_{AB} = 1.1, \omega_{BC} = 0.3, AB \perp OC, AB = 64.$

**Задача K18.26.**

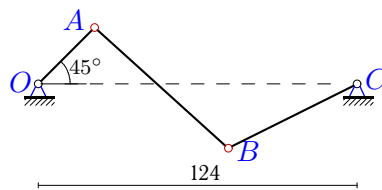
5



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

**Задача K18.28.**

5



$\omega_{OA} = 3,$   
 $\omega_{AB} = 0.5, \omega_{BC} = -1.8, OA = 31.$

**K18 Ответы.**  
**Уравнение трех угловых скоростей**

08.04.2012

| №  | <i>OA</i> | <i>AB</i> | <i>BC</i> |
|----|-----------|-----------|-----------|
| 1  | 31.000    | 72.714    | 52.553    |
| 2  | 31.000    | 20.855    | 57.285    |
| 3  | 27.000    | 20.397    | 97.914    |
| 4  | 101.359   | 33.000    | 60.984    |
| 5  | 29.000    | 64.397    | 32.024    |
| 6  | 29.000    | 62.787    | 33.224    |
| 7  | 31.000    | 68.732    | 56.095    |
| 8  | 41.351    | 58.000    | 184.992   |
| 9  | 73.378    | 74.000    | 138.501   |
| 10 | 49.885    | 69.000    | 225.676   |
| 11 | 38.043    | 67.000    | 166.913   |
| 12 | 31.000    | 44.945    | 47.902    |
| 13 | 33.000    | 40.553    | 48.357    |
| 14 | 86.595    | 29.000    | 49.837    |
| 15 | 68.644    | 62.000    | 116.730   |
| 16 | 86.595    | 29.000    | 49.837    |
| 17 | 29.000    | 136.259   | 114.951   |
| 18 | 68.031    | 33.000    | 82.500    |
| 19 | 31.000    | 59.457    | 42.246    |
| 20 | 42.836    | 73.000    | 174.911   |
| 21 | 31.000    | 210.724   | 187.579   |
| 22 | 97.220    | 68.000    | 101.106   |
| 23 | 29.000    | 28.168    | 108.491   |
| 24 | 39.520    | 64.000    | 173.921   |
| 25 | 43.186    | 64.000    | 176.918   |
| 26 | 29.000    | 74.686    | 57.405    |
| 27 | 27.000    | 25.459    | 107.656   |
| 28 | 31.000    | 68.732    | 56.095    |

K18 файл o18k5A