

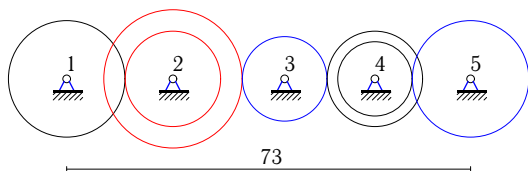
Передача вращений

Оси колес фрикционной передачи расположены на одной прямой. Даны радиусы колес 2-4, расстояние между крайними осями (см) и угловый скорости ведущего колеса 1 и ведомого 5 (с^{-1}). Найти радиусы колес 1 и 5.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.149.)

Задача К-6.1.

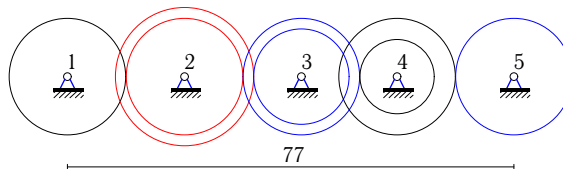
2



$$r_2 = 9, R_2 = 13, r_3 = 8, r_4 = 7, R_4 = 9, \\ \omega_1 = 729, \omega_5 = 910.$$

Задача К-6.2.

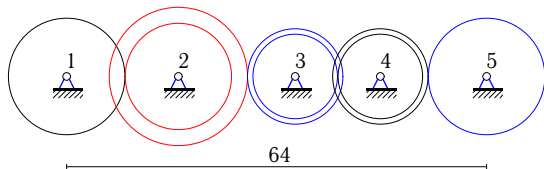
2



$$r_2 = 11, R_2 = 13, r_3 = 9, R_3 = 11, r_4 = 7, \\ R_4 = 11, \\ \omega_1 = 63, \omega_5 = 572.$$

Задача К-6.3.

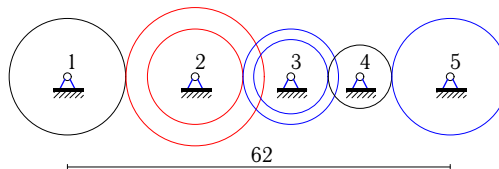
2



$$r_2 = 10, R_2 = 13, r_3 = 8, R_3 = 9, r_4 = 8, \\ R_4 = 9, \\ \omega_1 = 15, \omega_5 = 26.$$

Задача К-6.4.

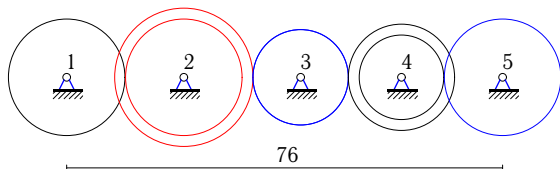
2



$$r_2 = 9, R_2 = 13, r_3 = 7, R_3 = 9, r_4 = 6, \\ \omega_1 = 13, \omega_5 = 14.$$

Задача К-6.5.

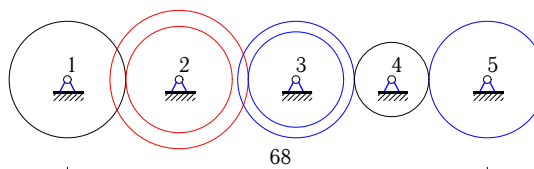
2



$$r_2 = 11, R_2 = 13, r_3 = 9, R_3 = 9, r_4 = 8, \\ R_4 = 10, \\ \omega_1 = 25, \omega_5 = 52.$$

Задача К-6.6.

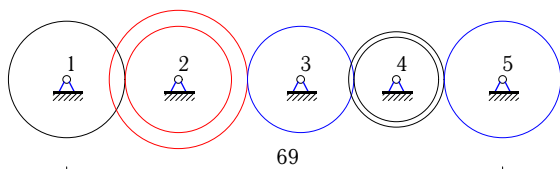
2



$$r_2 = 10, R_2 = 13, r_3 = 9, R_3 = 11, r_4 = 7, \\ \omega_1 = 75, \omega_5 = 143.$$

Задача К-6.7.

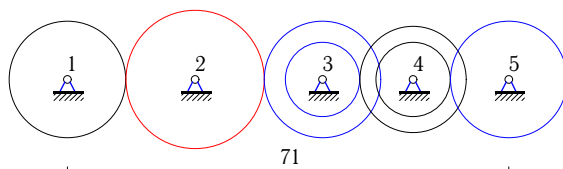
2



$$r_2 = 10, R_2 = 13, R_3 = 10, r_4 = 8, R_4 = 9, \\ \omega_1 = 40, \omega_5 = 117.$$

Задача К-6.8.

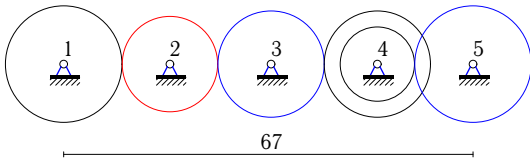
2



$$R_2 = 13, r_3 = 7, R_3 = 11, r_4 = 7, R_4 = 10, \\ \omega_1 = 4290, \omega_5 = 4459.$$

Задача К-6.9.

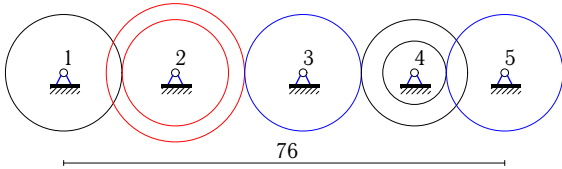
2



$$r_2 = 9, R_3 = 10, r_4 = 7, R_4 = 10, \\ \omega_1 = 10, \omega_5 = 21.$$

Задача К-6.11.

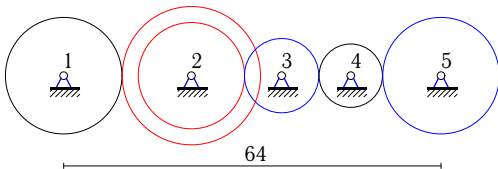
2



$$r_2 = 10, R_2 = 13, R_3 = 11, r_4 = 6, R_4 = 10, \\ \omega_1 = 25, \omega_5 = 78.$$

Задача К-6.13.

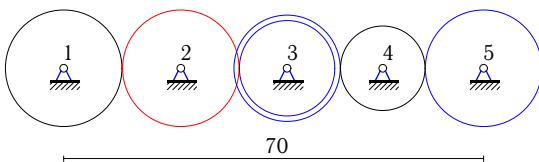
2



$$r_2 = 10, R_2 = 13, r_3 = 7, r_4 = 6, \\ \omega_1 = 26, \omega_5 = 55.$$

Задача К-6.15.

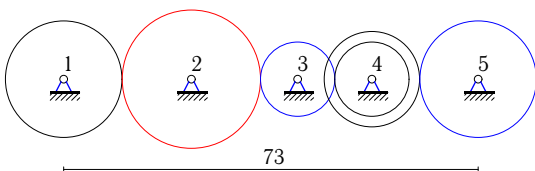
2



$$r_2 = 11, r_3 = 9, R_3 = 10, r_4 = 8, \\ \omega_1 = 36, \omega_5 = 25.$$

Задача К-6.17.

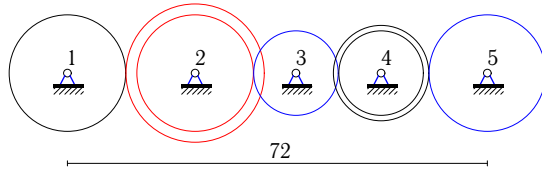
2



$$R_2 = 13, r_3 = 7, r_4 = 7, R_4 = 9, \\ \omega_1 = 182, \omega_5 = 429.$$

Задача К-6.10.

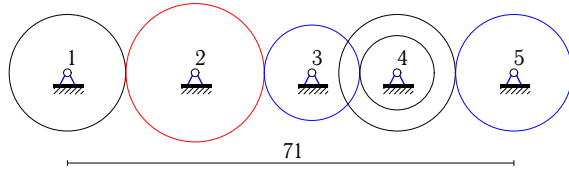
2



$$r_2 = 11, R_2 = 13, r_3 = 8, r_4 = 8, R_4 = 9, \\ \omega_1 = 26, \omega_5 = 99.$$

Задача К-6.12.

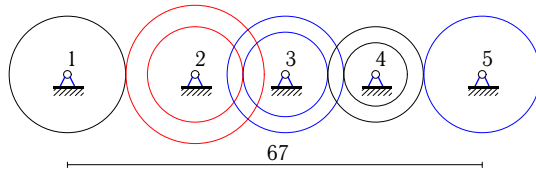
2



$$R_2 = 13, R_3 = 9, r_4 = 7, R_4 = 11, \\ \omega_1 = 455, \omega_5 = 572.$$

Задача К-6.14.

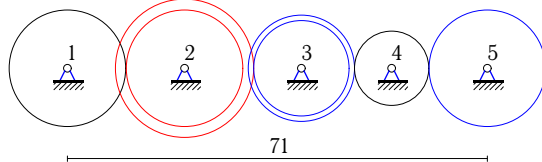
2



$$r_2 = 9, R_2 = 13, r_3 = 8, R_3 = 11, r_4 = 6, \\ R_4 = 9, \\ \omega_1 = 520, \omega_5 = 891.$$

Задача К-6.16.

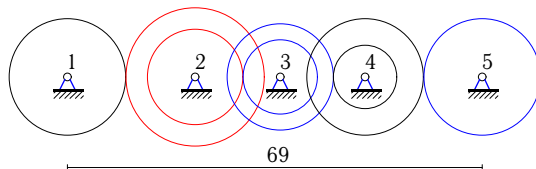
2



$$r_2 = 11, R_2 = 13, r_3 = 9, R_3 = 10, r_4 = 7, \\ \omega_1 = 891, \omega_5 = 650.$$

Задача К-6.18.

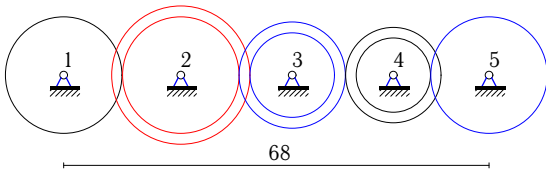
2



$$r_2 = 9, R_2 = 13, r_3 = 7, R_3 = 10, r_4 = 6, \\ R_4 = 11, \\ \omega_1 = 91, \omega_5 = 264.$$

Задача К-6.19.

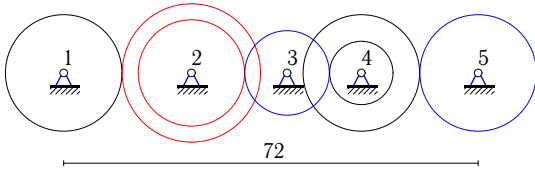
2



$$r_2 = 11, R_2 = 13, r_3 = 8, R_3 = 10, r_4 = 7, R_4 = 9, \\ \omega_1 = 264, \omega_5 = 455.$$

Задача К-6.21.

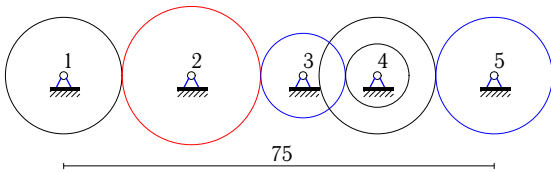
2



$$r_2 = 10, R_2 = 13, r_3 = 8, r_4 = 6, R_4 = 11, \\ \omega_1 = 39, \omega_5 = 121.$$

Задача К-6.23.

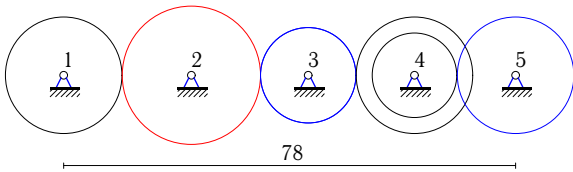
2



$$R_2 = 13, r_3 = 8, r_4 = 6, R_4 = 11, \\ \omega_1 = 702, \omega_5 = 1001.$$

Задача К-6.25.

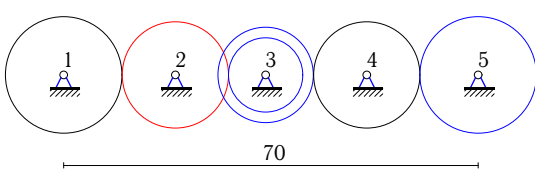
2



$$R_2 = 13, r_3 = 9, R_3 = 9, r_4 = 8, R_4 = 11, \\ \omega_1 = 143, \omega_5 = 208.$$

Задача К-6.27.

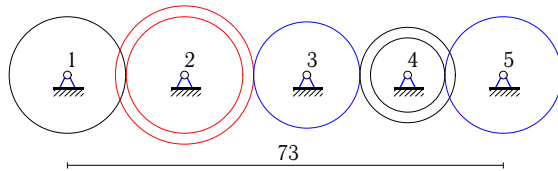
2



$$r_2 = 10, r_3 = 7, R_3 = 9, R_4 = 10, \\ \omega_1 = 28, \omega_5 = 27.$$

Задача К-6.20.

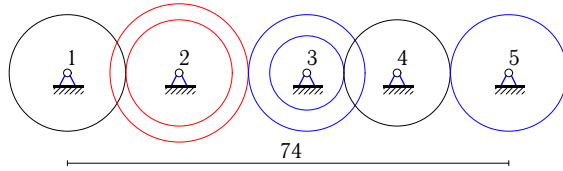
2



$$r_2 = 11, R_2 = 13, R_3 = 10, r_4 = 7, R_4 = 9, \\ \omega_1 = 33, \omega_5 = 26.$$

Задача К-6.22.

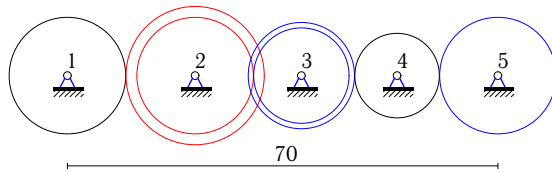
2



$$r_2 = 10, R_2 = 13, r_3 = 7, R_3 = 11, R_4 = 10, \\ \omega_1 = 660, \omega_5 = 637.$$

Задача К-6.24.

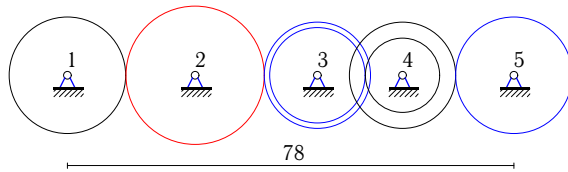
2



$$r_2 = 11, R_2 = 13, r_3 = 9, R_3 = 10, r_4 = 8, \\ \omega_1 = 39, \omega_5 = 44.$$

Задача К-6.26.

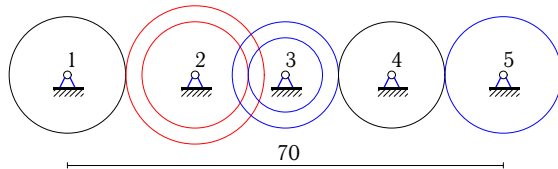
2



$$R_2 = 13, r_3 = 9, R_3 = 10, r_4 = 7, R_4 = 10, \\ \omega_1 = 91, \omega_5 = 195.$$

Задача К-6.28.

2



$$r_2 = 10, R_2 = 13, r_3 = 7, R_3 = 10, R_4 = 10, \\ \omega_1 = 39, \omega_5 = 100.$$

К-6 Ответы.
Передача вращений

21.04.2013

| № | ω_2 | ω_3 | ω_4 | R_1 | R_5 |
|----|------------|------------|------------|-------|-------|
| 1 | 810.000 | 1316.250 | 1170.000 | 10 | 9 |
| 2 | 68.727 | 99.273 | 156.000 | 12 | 3 |
| 3 | 6.000 | 8.667 | 8.667 | 4 | 3 |
| 4 | 8.000 | 8.000 | 9.333 | 8 | 4 |
| 5 | 25.000 | 36.111 | 32.500 | 11 | 5 |
| 6 | 45.000 | 65.000 | 102.143 | 6 | 5 |
| 7 | 24.000 | 31.200 | 39.000 | 6 | 3 |
| 8 | 2310.000 | 2730.000 | 1911.000 | 7 | 3 |
| 9 | 10.000 | 9.000 | 9.000 | 9 | 3 |
| 10 | 24.000 | 33.000 | 33.000 | 12 | 3 |
| 11 | 30.000 | 35.455 | 39.000 | 12 | 3 |
| 12 | 140.000 | 202.222 | 260.000 | 4 | 5 |
| 13 | 22.000 | 31.429 | 36.667 | 11 | 4 |
| 14 | 240.000 | 270.000 | 495.000 | 6 | 5 |
| 15 | 16.364 | 20.000 | 25.000 | 5 | 8 |
| 16 | 405.000 | 585.000 | 835.714 | 5 | 9 |
| 17 | 154.000 | 286.000 | 286.000 | 11 | 6 |
| 18 | 56.000 | 72.000 | 120.000 | 8 | 5 |
| 19 | 144.000 | 234.000 | 260.000 | 6 | 4 |
| 20 | 18.000 | 23.400 | 26.000 | 6 | 7 |
| 21 | 33.000 | 41.250 | 55.000 | 11 | 5 |
| 22 | 462.000 | 546.000 | 382.200 | 7 | 6 |
| 23 | 378.000 | 614.250 | 819.000 | 7 | 9 |
| 24 | 18.000 | 22.000 | 27.500 | 6 | 5 |
| 25 | 110.000 | 158.889 | 130.000 | 10 | 5 |
| 26 | 70.000 | 91.000 | 117.000 | 10 | 6 |
| 27 | 16.800 | 24.000 | 21.600 | 6 | 8 |
| 28 | 21.000 | 30.000 | 30.000 | 7 | 3 |

К-6 файл обк2А