

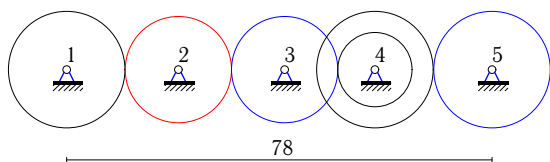
Передача вращений

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.

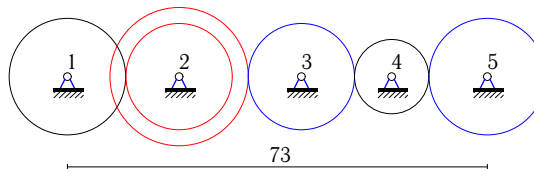
3



$$r_2 = 10, R_3 = 10, r_4 = 7, R_4 = 11, \\ \omega_1 = 63, \omega_5 = 121.$$

Задача К-6.2.

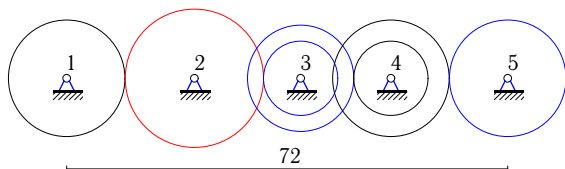
3



$$r_2 = 10, R_2 = 13, R_3 = 10, r_4 = 7, \\ \omega_1 = 90, \omega_5 = 91.$$

Задача К-6.3.

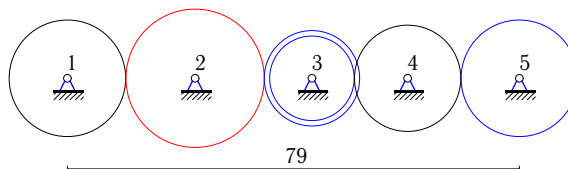
3



$$R_2 = 13, r_3 = 7, R_3 = 10, r_4 = 7, R_4 = 11, \\ \omega_1 = 1911, \omega_5 = 11440.$$

Задача К-6.4.

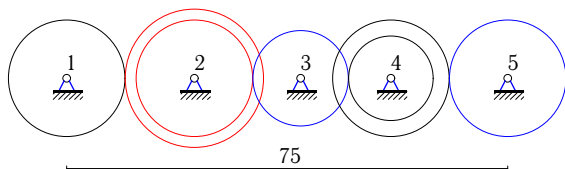
3



$$R_2 = 13, r_3 = 8, R_3 = 9, R_4 = 10, \\ \omega_1 = 351, \omega_5 = 520.$$

Задача К-6.5.

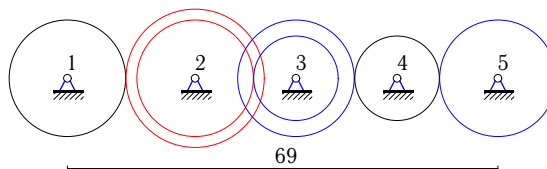
3



$$r_2 = 11, R_2 = 13, r_3 = 9, r_4 = 8, R_4 = 11, \\ \omega_1 = 520, \omega_5 = 1089.$$

Задача К-6.6.

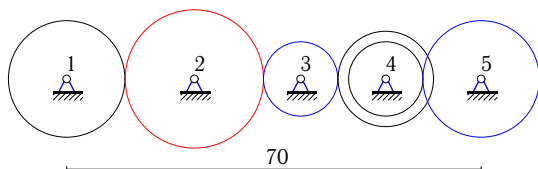
3



$$r_2 = 11, R_2 = 13, r_3 = 8, R_3 = 11, r_4 = 8, \\ \omega_1 = 104, \omega_5 = 121.$$

Задача К-6.7.

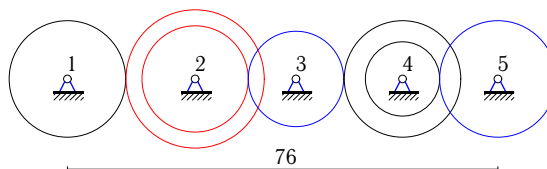
3



$$R_2 = 13, r_3 = 7, r_4 = 7, R_4 = 9, \\ \omega_1 = 65, \omega_5 = 91.$$

Задача К-6.8.

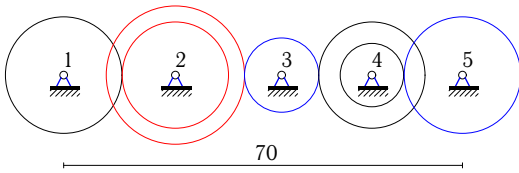
3



$$r_2 = 10, R_2 = 13, r_3 = 9, r_4 = 7, R_4 = 11, \\ \omega_1 = 143, \omega_5 = 100.$$

Задача К-6.9.

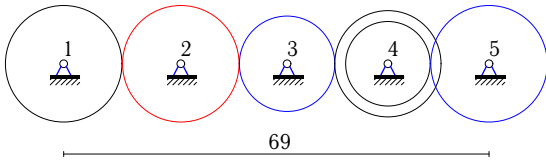
3



$$r_2 = 10, R_2 = 13, r_3 = 7, r_4 = 6, R_4 = 10, \\ \omega_1 = 125, \omega_5 = 234.$$

Задача К-6.11.

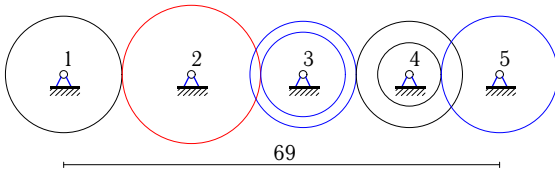
3



$$r_2 = 11, r_3 = 9, r_4 = 8, R_4 = 10, \\ \omega_1 = 25, \omega_5 = 24.$$

Задача К-6.13.

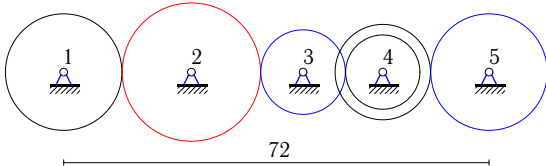
3



$$R_2 = 13, r_3 = 8, R_3 = 10, r_4 = 6, R_4 = 10, \\ \omega_1 = 208, \omega_5 = 195.$$

Задача К-6.15.

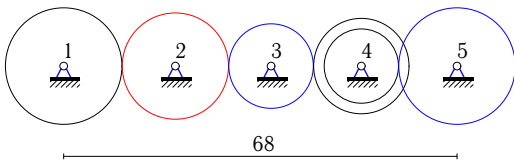
3



$$R_2 = 13, r_3 = 8, r_4 = 7, R_4 = 9, \\ \omega_1 = 455, \omega_5 = 234.$$

Задача К-6.17.

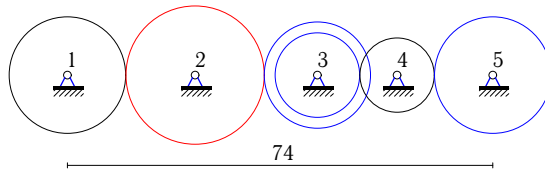
3



$$r_2 = 10, r_3 = 8, r_4 = 7, R_4 = 9, \\ \omega_1 = 81, \omega_5 = 49.$$

Задача К-6.10.

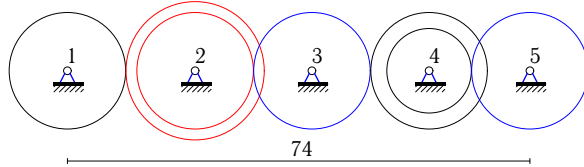
3



$$R_2 = 13, r_3 = 8, R_3 = 10, r_4 = 7, \\ \omega_1 = 39, \omega_5 = 52.$$

Задача К-6.12.

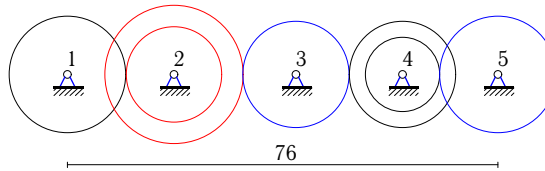
3



$$r_2 = 11, R_2 = 13, R_3 = 11, r_4 = 8, R_4 = 11, \\ \omega_1 = 65, \omega_5 = 32.$$

Задача К-6.14.

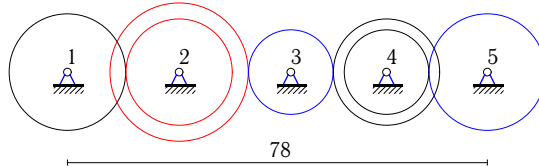
3



$$r_2 = 9, R_2 = 13, R_3 = 10, r_4 = 7, R_4 = 10, \\ \omega_1 = 540, \omega_5 = 1001.$$

Задача К-6.16.

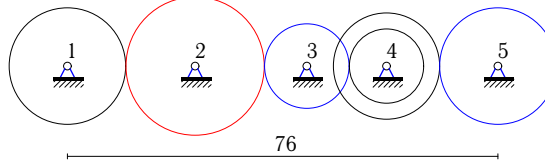
3



$$r_2 = 10, R_2 = 13, r_3 = 8, r_4 = 8, R_4 = 10, \\ \omega_1 = 75, \omega_5 = 104.$$

Задача К-6.18.

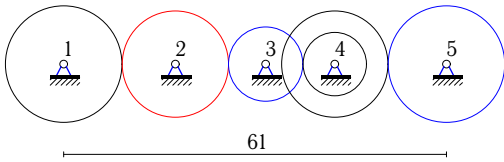
3



$$R_2 = 13, r_3 = 8, r_4 = 7, R_4 = 10, \\ \omega_1 = 273, \omega_5 = 715.$$

Задача К-6.19.

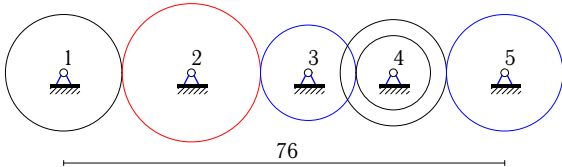
3



$$r_2 = 10, r_3 = 7, r_4 = 6, R_4 = 10, \\ \omega_1 = 1, \omega_5 = 2.$$

Задача К-6.21.

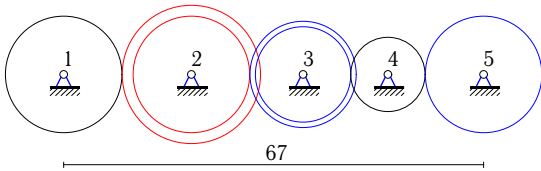
3



$$R_2 = 13, r_3 = 9, r_4 = 7, R_4 = 10, \\ \omega_1 = 273, \omega_5 = 260.$$

Задача К-6.23.

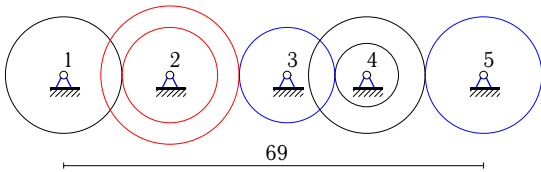
3



$$r_2 = 11, R_2 = 13, r_3 = 9, R_3 = 10, r_4 = 7, \\ \omega_1 = 130, \omega_5 = 99.$$

Задача К-6.25.

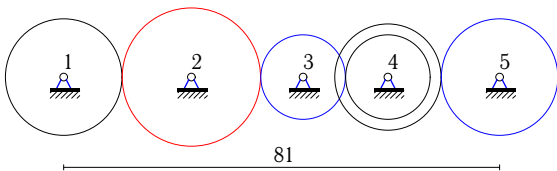
3



$$r_2 = 9, R_2 = 13, R_3 = 9, r_4 = 6, R_4 = 11, \\ \omega_1 = 54, \omega_5 = 143.$$

Задача К-6.27.

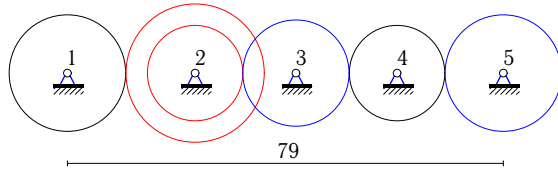
3



$$R_2 = 13, r_3 = 8, r_4 = 8, R_4 = 10, \\ \omega_1 = 39, \omega_5 = 65.$$

Задача К-6.20.

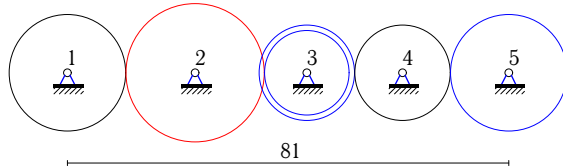
3



$$r_2 = 9, R_2 = 13, R_3 = 10, R_4 = 9, \\ \omega_1 = 13, \omega_5 = 10.$$

Задача К-6.22.

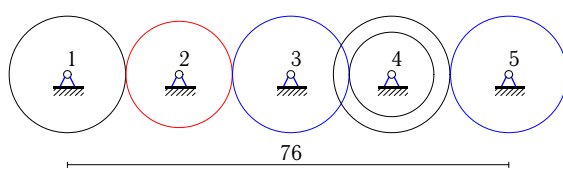
3



$$R_2 = 13, r_3 = 8, R_3 = 9, R_4 = 9, \\ \omega_1 = 208, \omega_5 = 351.$$

Задача К-6.24.

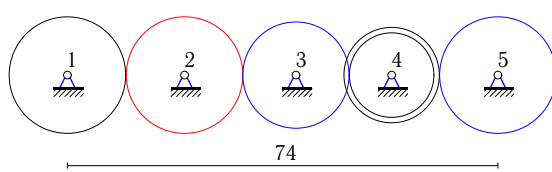
3



$$r_2 = 10, R_3 = 11, r_4 = 8, R_4 = 11, \\ \omega_1 = 12, \omega_5 = 11.$$

Задача К-6.26.

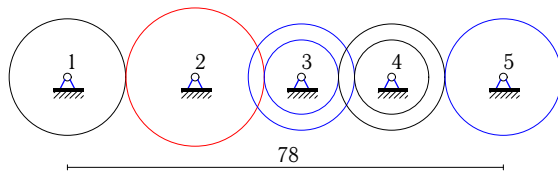
3



$$r_2 = 11, R_3 = 10, r_4 = 8, R_4 = 9, \\ \omega_1 = 7, \omega_5 = 9.$$

Задача К-6.28.

3



$$R_2 = 13, r_3 = 7, R_3 = 10, r_4 = 7, R_4 = 10, \\ \omega_1 = 637, \omega_5 = 1300.$$

К-6 Ответы.
Передача вращений

21.04.2013

№	ω_2	ω_3	ω_4	R_1	R_5
1	69.300	69.300	99.000	11	9
2	63.000	81.900	117.000	7	9
3	1176.000	2184.000	3120.000	8	3
4	270.000	390.000	312.000	10	6
5	360.000	440.000	495.000	9	5
6	40.000	55.000	75.625	5	5
7	45.000	83.571	65.000	9	5
8	110.000	122.222	100.000	10	7
9	150.000	278.571	195.000	12	5
10	30.000	39.000	44.571	10	6
11	13.636	16.667	15.000	6	5
12	20.000	20.000	20.000	4	5
13	80.000	130.000	130.000	5	4
14	660.000	858.000	858.000	11	6
15	140.000	227.500	260.000	4	10
16	90.000	146.250	117.000	12	9
17	56.700	70.875	63.000	7	9
18	231.000	375.375	429.000	11	6
19	0.600	0.857	1.000	6	5
20	10.000	9.000	10.000	10	9
21	126.000	182.000	234.000	6	9
22	192.000	312.000	312.000	12	8
23	50.000	55.000	70.714	5	5
24	7.200	6.545	9.000	6	9
25	36.000	52.000	78.000	6	6
26	5.091	5.600	7.000	8	7
27	36.000	58.500	58.500	12	9
28	441.000	819.000	1170.000	9	9

К-6 файл обк3А