

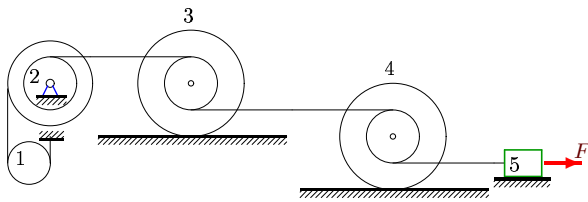
Кинетическая энергия системы. Приведенные массы

Механическая система, состоящая из пяти тел 1, 2, 3, 4 и 5, движется под действием внешних сил. Заданы радиусы цилиндров и блоков. Радиусы инерции ρ даны для блоков, цилиндры считать однородными. Горизонтальный стержень, находящийся в зацеплении с блоками, считать невесомым. Массы даны в килограммах, радиусы — в сантиметрах. Вычислить приведенную массу системы μ в формуле $T = \mu v_1^2/2$, где v_1 — скорость груза 1 (или центра цилиндра 1).

Курсанов М.Н. Задачи по теоретической механике с решениями в **Maple** 11. — М.: ФИЗМАТЛИТ, 2010. — 264 с. (с.111)

Задача D-33.1.

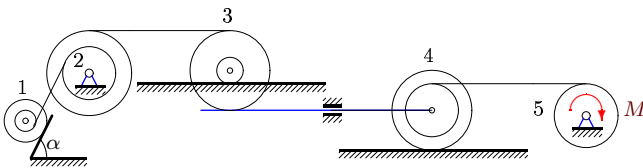
Архипов Даниил



$$\begin{aligned} R_2 &= 4, r_2 = 2, \rho_2 = 3, \\ R_3 &= 4, r_3 = 2, \rho_3 = 3, \\ R_4 &= 4, r_4 = 2, \rho_4 = 3, \\ m_1 &= 2, m_2 = 8, \\ m_3 &= 144, m_4 = 324, \\ m_5 &= 162. \end{aligned}$$

Задача D-33.2.

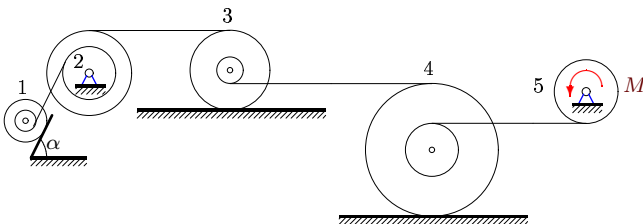
Бабичева Мария



$$\begin{aligned} R_1 &= 2, r_1 = 1, \rho_1 = 1, \\ R_2 &= 4, r_2 = 2, \rho_2 = 3, \\ R_3 &= 3, r_3 = 1, \rho_3 = 2, \\ R_4 &= 3, r_4 = 2, \rho_4 = 2, \\ m_1 &= 4, m_2 = 96, \\ m_3 &= 64, m_4 = 108, \\ m_5 &= 144. \end{aligned}$$

Задача D-33.3.

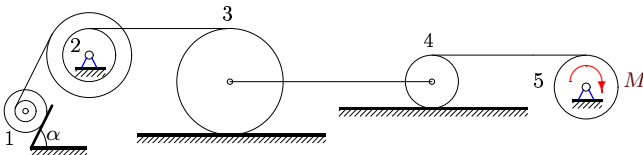
Балухин Семён



$$\begin{aligned} R_1 &= 2, r_1 = 1, \rho_1 = 1, \\ R_2 &= 4, r_2 = 2, \rho_2 = 3, \\ R_3 &= 3, r_3 = 1, \rho_3 = 2, \\ R_4 &= 5, r_4 = 2, \rho_4 = 4, \\ m_1 &= 4, m_2 = 48, \\ m_3 &= 144, m_4 = 900, \\ m_5 &= 1800. \end{aligned}$$

Задача D-33.4.

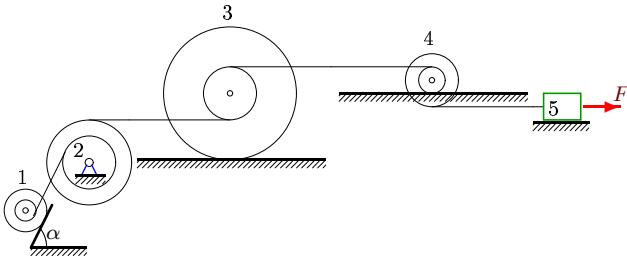
Беспалько Александр



$$\begin{aligned} R_1 &= 2, r_1 = 1, \rho_1 = 2, \\ R_2 &= 3, r_2 = 2, \rho_2 = 3, \\ R_3 &= 4, \\ R_4 &= 2, \\ m_1 &= 4, m_2 = 4, \\ m_3 &= 32, m_4 = 24, \\ m_5 &= 4. \end{aligned}$$

Задача D-33.5.

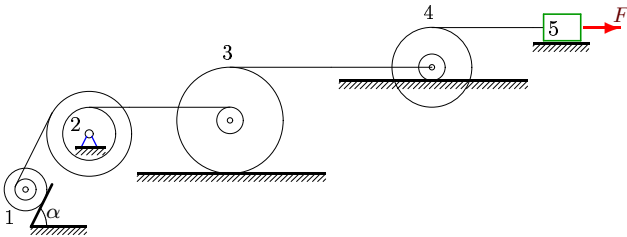
Бойматов Бахтиёр



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 4, m_2 = 96, \\
 m_3 &= 36, m_4 = 54, \\
 m_5 &= 72.
 \end{aligned}$$

Задача D-33.6.

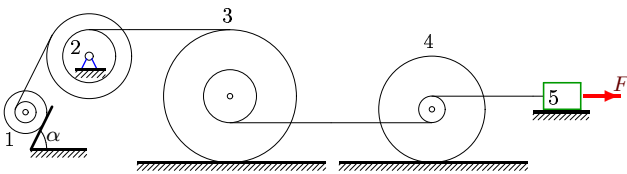
Бондаренко Николай



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 12, m_2 = 20, \\
 m_3 &= 6, m_4 = 25, \\
 m_5 &= 25.
 \end{aligned}$$

Задача D-33.7.

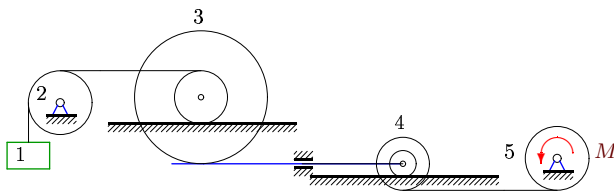
Борцов Борис



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 4, r_4 = 1, \rho_4 = 3, \\
 m_1 &= 4, m_2 = 12, \\
 m_3 &= 100, m_4 = 12, \\
 m_5 &= 8.
 \end{aligned}$$

Задача D-33.8.

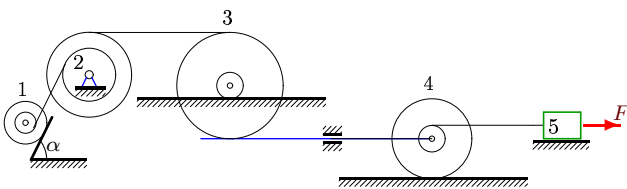
Булыгин Дмитрий



$$\begin{aligned}
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 20, m_2 = 2, \\
 m_3 &= 16, m_4 = 24, \\
 m_5 &= 64.
 \end{aligned}$$

Задача D-33.9.

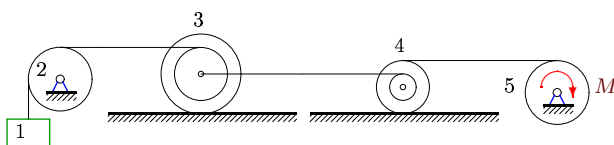
Воронова Екатерина



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 20, m_2 = 32, \\
 m_3 &= 40, m_4 = 175, \\
 m_5 &= 150.
 \end{aligned}$$

Задача D-33.10.

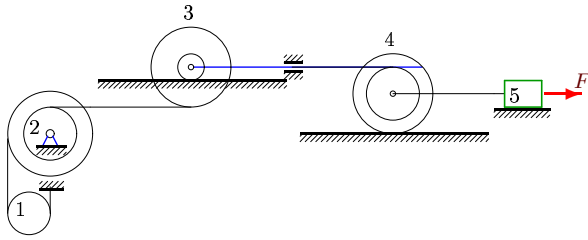
Галдеев Николай



$$\begin{aligned}
 R_3 &= 3, r_3 = 2, \rho_3 = 2, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 6, m_2 = 12, \\
 m_3 &= 100, m_4 = 15, \\
 m_5 &= 100.
 \end{aligned}$$

Задача D-33.11.

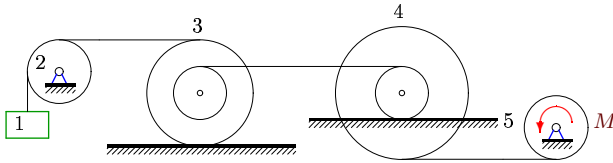
Грибов Вадим



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 3, r_4 = 2, \rho_4 = 2, \\
 m_1 &= 6, m_2 = 4, \\
 m_3 &= 24, m_4 = 100, \\
 m_5 &= 100.
 \end{aligned}$$

Задача D-33.12.

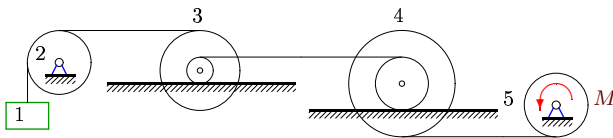
Давыдов Кирилл



$$\begin{aligned}
 R_3 &= 4, r_3 = 2, \rho_3 = 3, \\
 R_4 &= 5, r_4 = 2, \rho_4 = 4, \\
 m_1 &= 12, m_2 = 8, \\
 m_3 &= 256, m_4 = 192, \\
 m_5 &= 512.
 \end{aligned}$$

Задача D-33.13.

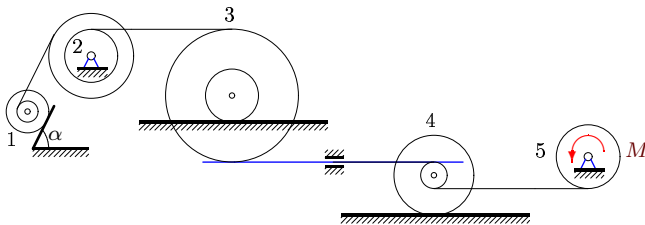
Друянов Антон



$$\begin{aligned}
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 4, r_4 = 2, \rho_4 = 3, \\
 m_1 &= 17, m_2 = 4, \\
 m_3 &= 64, m_4 = 192, \\
 m_5 &= 64.
 \end{aligned}$$

Задача D-33.14.

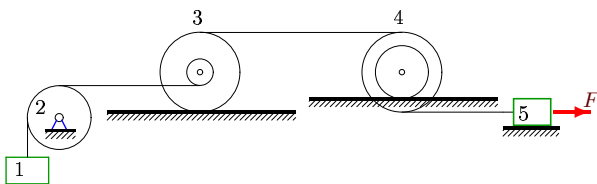
Егорова Елена



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 4, m_2 = 8, \\
 m_3 &= 196, m_4 = 784, \\
 m_5 &= 392.
 \end{aligned}$$

Задача D-33.15.

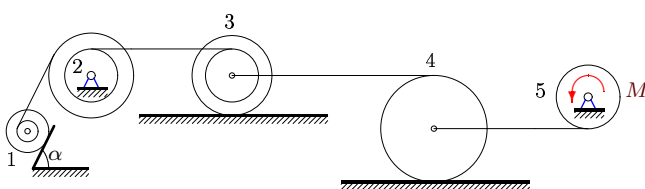
Егупов Егор



$$\begin{aligned}
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 3, r_4 = 2, \rho_4 = 2, \\
 m_1 &= 11, m_2 = 2, \\
 m_3 &= 16, m_4 = 75, \\
 m_5 &= 50.
 \end{aligned}$$

Задача D-33.16.

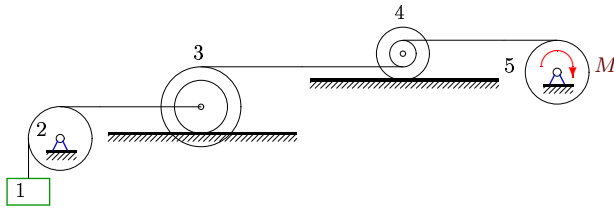
Зацепин Марк



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 2, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 3, r_3 = 2, \rho_3 = 2, \\
 R_4 &= 4, \\
 m_1 &= 4, m_2 = 16, \\
 m_3 &= 100, m_4 = 200, \\
 m_5 &= 200.
 \end{aligned}$$

Задача D-33.17.

Исаев Дэни



$$R_3 = 3, r_3 = 2, \rho_3 = 2,$$

$$R_4 = 2, r_4 = 1, \rho_4 = 1,$$

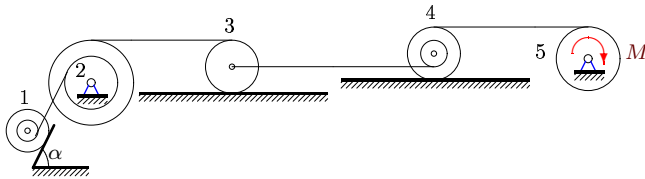
$$m_1 = 13, m_2 = 12,$$

$$m_3 = 4, m_4 = 4,$$

$$m_5 = 8.$$

Задача D-33.18.

Кабанов Валерий



$$R_1 = 2, r_1 = 1, \rho_1 = 2,$$

$$R_2 = 4, r_2 = 2, \rho_2 = 3,$$

$$R_3 = 2,$$

$$R_4 = 2, r_4 = 1, \rho_4 = 1,$$

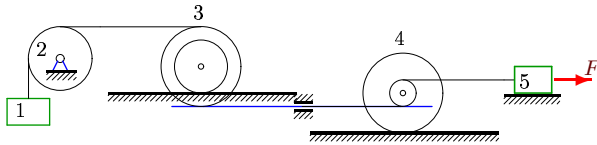
$$m_1 = 4, m_2 = 16,$$

$$m_3 = 32, m_4 = 12,$$

$$m_5 = 4.$$

Задача D-33.19.

Киреевко Владимир



$$R_3 = 3, r_3 = 2, \rho_3 = 2,$$

$$R_4 = 3, r_4 = 1, \rho_4 = 2,$$

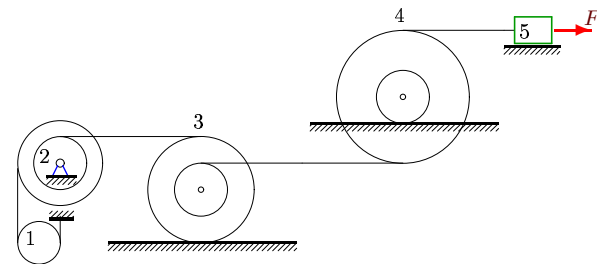
$$m_1 = 14, m_2 = 10,$$

$$m_3 = 100, m_4 = 100,$$

$$m_5 = 50.$$

Задача D-33.20.

Кириллов Евгений



$$R_2 = 4, r_2 = 2, \rho_2 = 2,$$

$$R_3 = 4, r_3 = 2, \rho_3 = 3,$$

$$R_4 = 5, r_4 = 2, \rho_4 = 4,$$

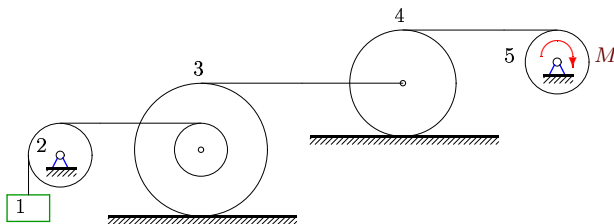
$$m_1 = 2, m_2 = 16,$$

$$m_3 = 256, m_4 = 12,$$

$$m_5 = 32.$$

Задача D-33.21.

Киселев Михаил



$$R_3 = 5, r_3 = 2, \rho_3 = 4,$$

$$R_4 = 4,$$

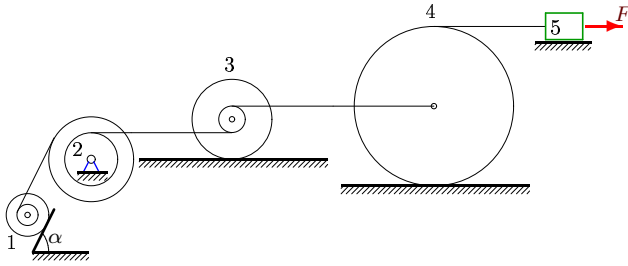
$$m_1 = 8, m_2 = 10,$$

$$m_3 = 343, m_4 = 49,$$

$$m_5 = 98.$$

Задача D-33.22.

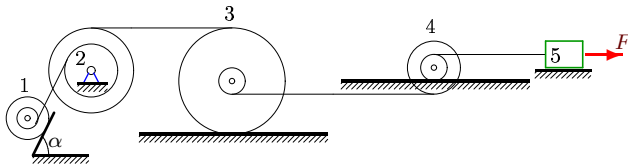
Кобзева Ксения



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 6, \\
 m_1 &= 4, m_2 = 16, \\
 m_3 &= 16, m_4 = 3, \\
 m_5 &= 2.
 \end{aligned}$$

Задача D-33.23.

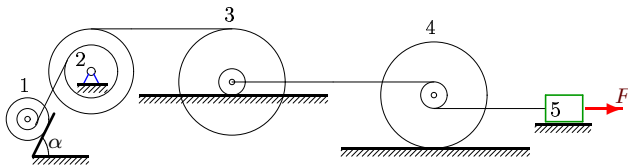
Кондин Александр



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 4, m_2 = 96, \\
 m_3 &= 256, m_4 = 96, \\
 m_5 &= 32.
 \end{aligned}$$

Задача D-33.24.

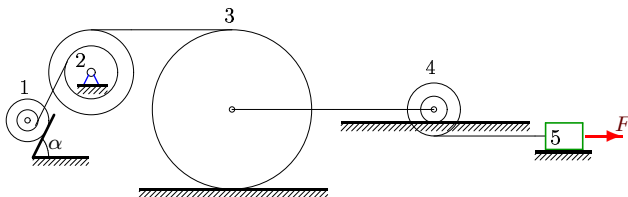
Корчагин Иван



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 4, r_4 = 1, \rho_4 = 3, \\
 m_1 &= 4, m_2 = 64, \\
 m_3 &= 20, m_4 = 75, \\
 m_5 &= 625.
 \end{aligned}$$

Задача D-33.25.

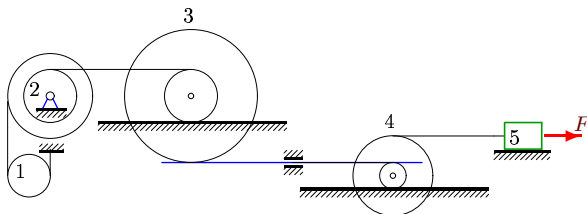
Кучуберия Лаша



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 6, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 4, m_2 = 16, \\
 m_3 &= 32, m_4 = 6, \\
 m_5 &= 8.
 \end{aligned}$$

Задача D-33.26.

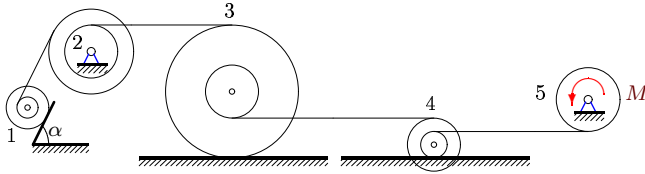
Логвиненко Валентина



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 2, m_2 = 20, \\
 m_3 &= 16, m_4 = 192, \\
 m_5 &= 8.
 \end{aligned}$$

Задача D-33.27.

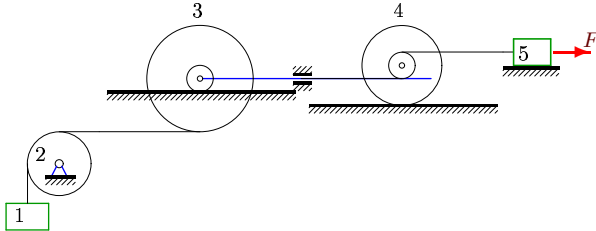
Логвинов Федор



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 4, m_2 = 24, \\
 m_3 &= 100, m_4 = 150, \\
 m_5 &= 100.
 \end{aligned}$$

Задача D-33.28.

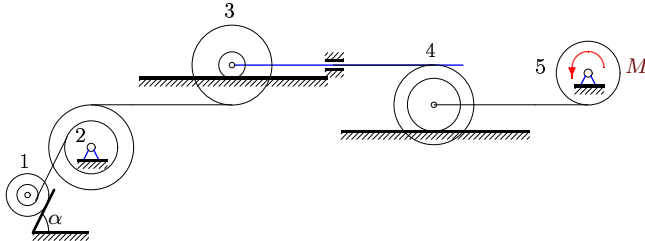
Мацко Ксения



$$\begin{aligned}
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 15, m_2 = 10, \\
 m_3 &= 36, m_4 = 108, \\
 m_5 &= 18.
 \end{aligned}$$

Задача D-33.29.

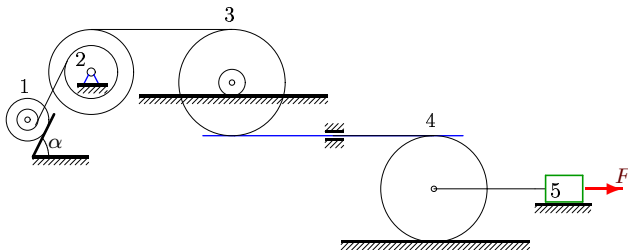
Моисеева Анастасия



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 3, r_4 = 2, \rho_4 = 2, \\
 m_1 &= 4, m_2 = 16, \\
 m_3 &= 16, m_4 = 75, \\
 m_5 &= 100.
 \end{aligned}$$

Задача D-33.30.

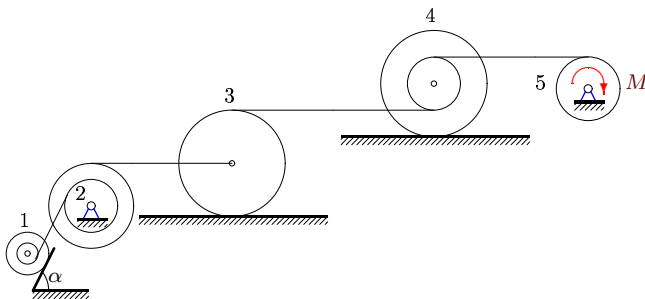
Мусанабиев Магомед



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 4, \\
 m_1 &= 20, m_2 = 80, \\
 m_3 &= 40, m_4 = 200, \\
 m_5 &= 100.
 \end{aligned}$$

Задача D-33.31.

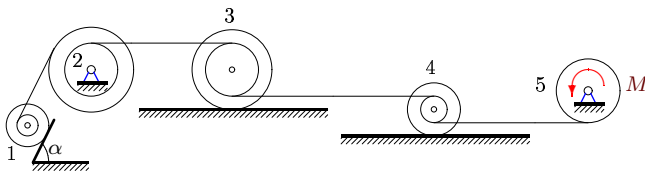
Муханов Владислав



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 4, \\
 R_4 &= 4, r_4 = 2, \rho_4 = 3, \\
 m_1 &= 8, m_2 = 32, \\
 m_3 &= 10, m_4 = 4, \\
 m_5 &= 6.
 \end{aligned}$$

Задача D-33.32.

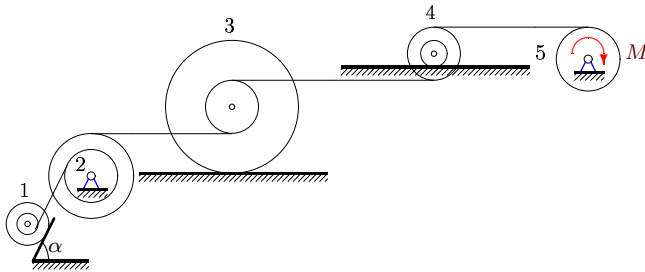
Никулина Алина



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 2, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 3, r_3 = 2, \rho_3 = 2, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 8, m_2 = 24, \\
 m_3 &= 125, m_4 = 180, \\
 m_5 &= 450.
 \end{aligned}$$

Задача D-33.33.

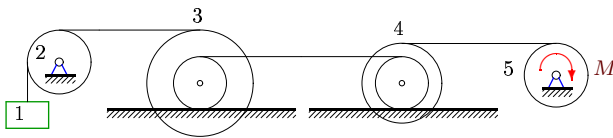
Ольмезов Омар



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 4, m_2 = 96, \\
 m_3 &= 36, m_4 = 27, \\
 m_5 &= 4.
 \end{aligned}$$

Задача D-33.34.

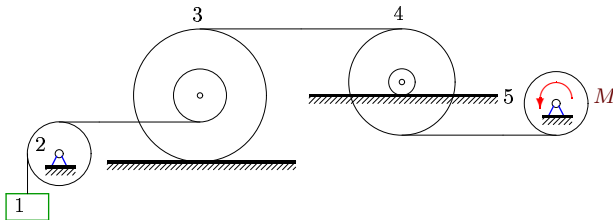
Оралбеков Кирилл



$$\begin{aligned}
 R_3 &= 4, r_3 = 2, \rho_3 = 3, \\
 R_4 &= 3, r_4 = 2, \rho_4 = 2, \\
 m_1 &= 13, m_2 = 12, \\
 m_3 &= 144, m_4 = 27, \\
 m_5 &= 144.
 \end{aligned}$$

Задача D-33.35.

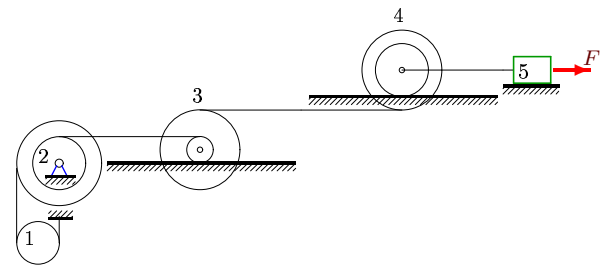
Охлопкова Зинаида



$$\begin{aligned}
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 4, r_4 = 1, \rho_4 = 3, \\
 m_1 &= 11, m_2 = 6, \\
 m_3 &= 36, m_4 = 27, \\
 m_5 &= 4.
 \end{aligned}$$

Задача D-33.36.

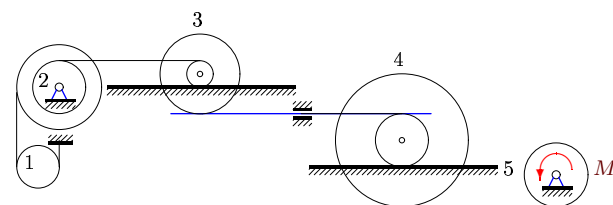
Палагицкий Сергей



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 3, r_4 = 2, \rho_4 = 2, \\
 m_1 &= 2, m_2 = 24, \\
 m_3 &= 16, m_4 = 3, \\
 m_5 &= 2.
 \end{aligned}$$

Задача D-33.37.

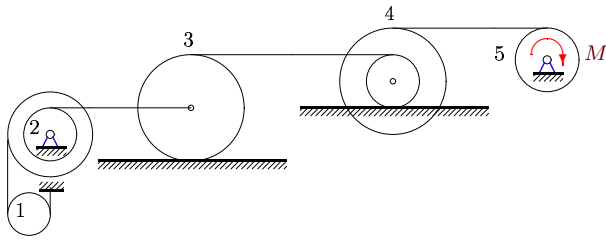
Перехватов Андрей



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 5, r_4 = 2, \rho_4 = 4, \\
 m_1 &= 2, m_2 = 12, \\
 m_3 &= 16, m_4 = 12, \\
 m_5 &= 64.
 \end{aligned}$$

Задача D-33.38.

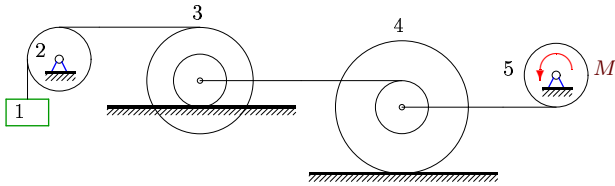
Пиженко Анна



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 4, \\
 R_4 &= 4, r_4 = 2, \rho_4 = 3, \\
 m_1 &= 2, m_2 = 8, \\
 m_3 &= 8, m_4 = 12, \\
 m_5 &= 4.
 \end{aligned}$$

Задача D-33.39.

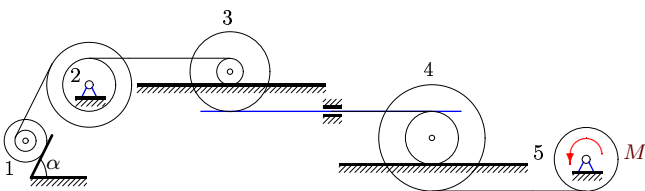
Польшиков Александр



$$\begin{aligned}
 R_3 &= 4, r_3 = 2, \rho_3 = 3, \\
 R_4 &= 5, r_4 = 2, \rho_4 = 4, \\
 m_1 &= 15, m_2 = 8, \\
 m_3 &= 252, m_4 = 441, \\
 m_5 &= 882.
 \end{aligned}$$

Задача D-33.40.

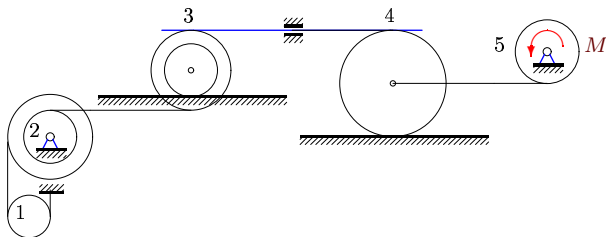
Пронин Сергей



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 4, r_4 = 2, \rho_4 = 3, \\
 m_1 &= 4, m_2 = 8, \\
 m_3 &= 16, m_4 = 48, \\
 m_5 &= 16.
 \end{aligned}$$

Задача D-33.41.

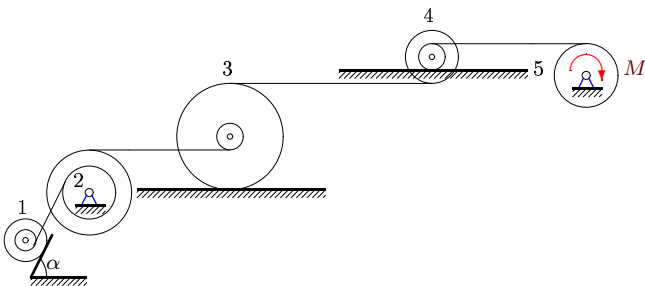
Росляков Георгий



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 3, r_3 = 2, \rho_3 = 2, \\
 R_4 &= 4, \\
 m_1 &= 4, m_2 = 20, \\
 m_3 &= 5, m_4 = 32, \\
 m_5 &= 24.
 \end{aligned}$$

Задача D-33.42.

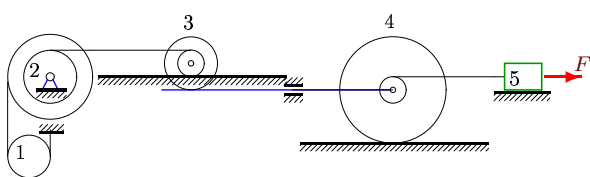
Сирик Елизавета



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 4, m_2 = 96, \\
 m_3 &= 36, m_4 = 9, \\
 m_5 &= 18.
 \end{aligned}$$

Задача D-33.43.

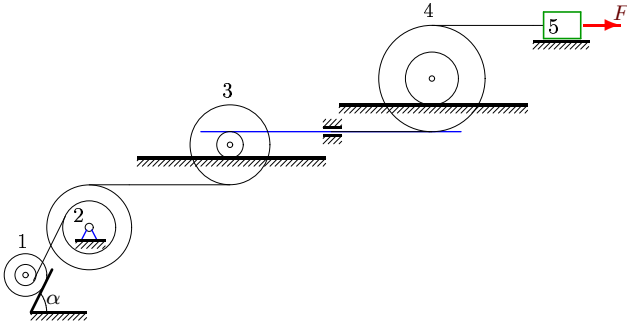
Соловьёв Алексей



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 2, r_3 = 1, \rho_3 = 1, \\
 R_4 &= 4, r_4 = 1, \rho_4 = 3, \\
 m_1 &= 2, m_2 = 16, \\
 m_3 &= 8, m_4 = 192, \\
 m_5 &= 128.
 \end{aligned}$$

Задача D-33.44.

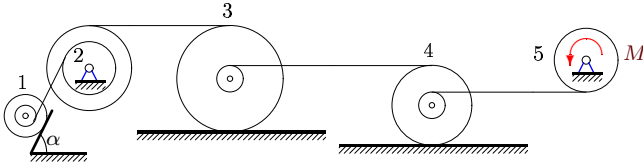
Стрелков Владислав



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 3, r_3 = 1, \rho_3 = 2, \\
 R_4 &= 4, r_4 = 2, \rho_4 = 3, \\
 m_1 &= 12, m_2 = 80, \\
 m_3 &= 24, m_4 = 20, \\
 m_5 &= 4.
 \end{aligned}$$

Задача D-33.45.

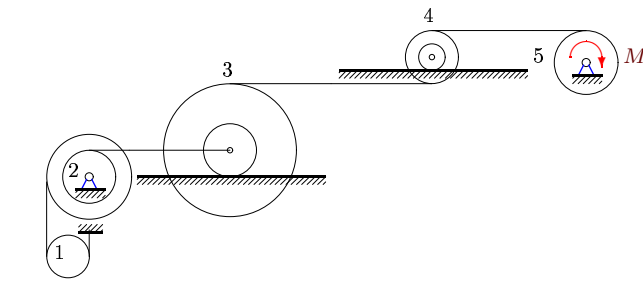
Суконкин Владислав



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 4, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 4, r_3 = 1, \rho_3 = 3, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 4, m_2 = 80, \\
 m_3 &= 256, m_4 = 2304, \\
 m_5 &= 288.
 \end{aligned}$$

Задача D-33.46.

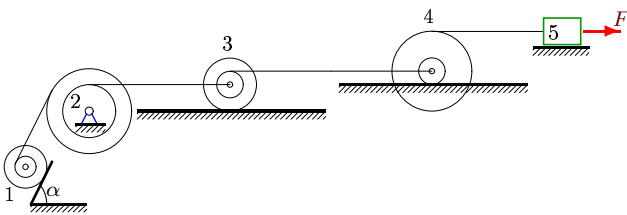
Тихов Семен



$$\begin{aligned}
 R_2 &= 4, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 2, r_4 = 1, \rho_4 = 1, \\
 m_1 &= 2, m_2 = 24, \\
 m_3 &= 4, m_4 = 6, \\
 m_5 &= 8.
 \end{aligned}$$

Задача D-33.47.

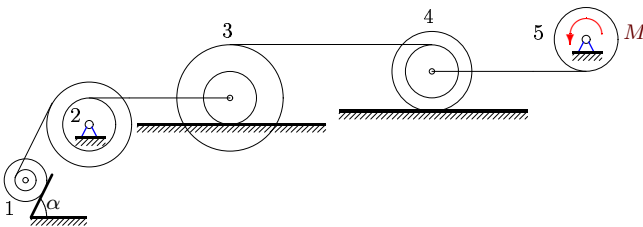
Труханов Андрей



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 2, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 2, r_3 = 1, \rho_3 = 1, \\
 R_4 &= 3, r_4 = 1, \rho_4 = 2, \\
 m_1 &= 12, m_2 = 20, \\
 m_3 &= 24, m_4 = 20, \\
 m_5 &= 4.
 \end{aligned}$$

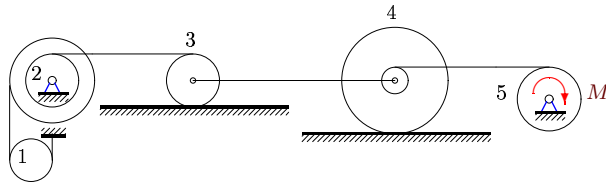
Задача D-33.48.

Урман Никита



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 3, \\
 R_3 &= 4, r_3 = 2, \rho_3 = 3, \\
 R_4 &= 3, r_4 = 2, \rho_4 = 2, \\
 m_1 &= 4, m_2 = 24, \\
 m_3 &= 16, m_4 = 75, \\
 m_5 &= 100.
 \end{aligned}$$

Задача D-33.49.



Форталънов Степан

$$R_2 = 4, r_2 = 2, \rho_2 = 3,$$

$$R_3 = 2,$$

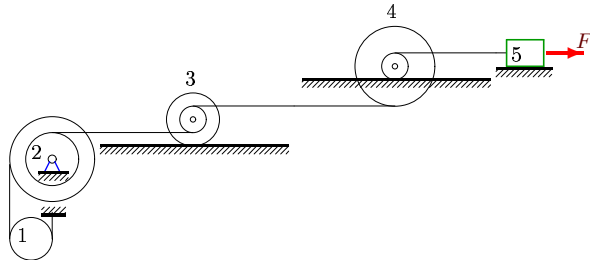
$$R_4 = 4, r_4 = 1, \rho_4 = 3,$$

$$m_1 = 2, m_2 = 16,$$

$$m_3 = 32, m_4 = 192,$$

$$m_5 = 128.$$

Задача D-33.50.



Хуснияров Альберт

$$R_2 = 4, r_2 = 2, \rho_2 = 2,$$

$$R_3 = 2, r_3 = 1, \rho_3 = 1,$$

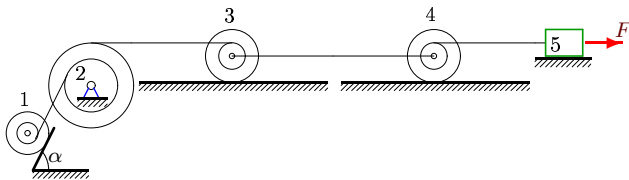
$$R_4 = 3, r_4 = 1, \rho_4 = 2,$$

$$m_1 = 2, m_2 = 8,$$

$$m_3 = 4, m_4 = 12,$$

$$m_5 = 2.$$

Задача D-33.51.



Шарчевич Денис

$$R_1 = 2, r_1 = 1, \rho_1 = 2,$$

$$R_2 = 4, r_2 = 2, \rho_2 = 3,$$

$$R_3 = 2, r_3 = 1, \rho_3 = 1,$$

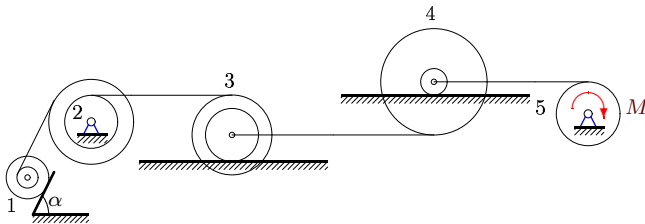
$$R_4 = 2, r_4 = 1, \rho_4 = 1,$$

$$m_1 = 4, m_2 = 96,$$

$$m_3 = 36, m_4 = 27,$$

$$m_5 = 2.$$

Задача D-33.52.



Шмакотин Артур

$$R_1 = 2, r_1 = 1, \rho_1 = 2,$$

$$R_2 = 3, r_2 = 2, \rho_2 = 2,$$

$$R_3 = 3, r_3 = 2, \rho_3 = 2,$$

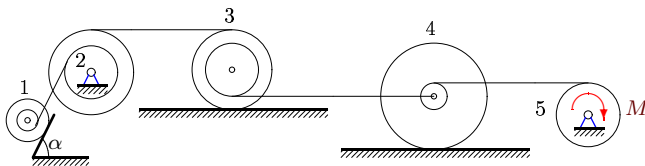
$$R_4 = 4, r_4 = 1, \rho_4 = 3,$$

$$m_1 = 4, m_2 = 12,$$

$$m_3 = 100, m_4 = 135,$$

$$m_5 = 450.$$

Задача D-33.53.



Шумилов Алексей

$$R_1 = 2, r_1 = 1, \rho_1 = 2,$$

$$R_2 = 4, r_2 = 2, \rho_2 = 3,$$

$$R_3 = 3, r_3 = 2, \rho_3 = 2,$$

$$R_4 = 4, r_4 = 1, \rho_4 = 3,$$

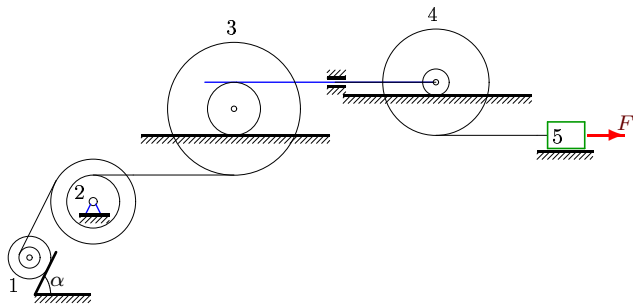
$$m_1 = 8, m_2 = 64,$$

$$m_3 = 180, m_4 = 576,$$

$$m_5 = 1152.$$

Задача D-33.54.

Нагорная М.



$$\begin{aligned}
 R_1 &= 2, r_1 = 1, \rho_1 = 1, \\
 R_2 &= 3, r_2 = 2, \rho_2 = 2, \\
 R_3 &= 5, r_3 = 2, \rho_3 = 4, \\
 R_4 &= 4, r_4 = 1, \rho_4 = 3, \\
 m_1 &= 4, m_2 = 12, \\
 m_3 &= 36, m_4 = 9, \\
 m_5 &= 2.
 \end{aligned}$$

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Ответы.

Кинетическая энергия системы. Приведенные массы 19-

Apr-18

№	μ_1	μ_2	μ_3	μ_4	μ_5	$\sum \mu_k$	
1	3	18	100	25	2	148	Архипов Даниил
2	5	54	20	39	50	168	Бабичева Мария
3	5	27	52	41	49	174	Балухин Семён
4	8	9	12	9	2	40	Беспалько Александр
5	5	24	164	147	98	438	Бойматов Бахтиёр
6	15	20	6	320	1024	1385	Бондаренко Николай
7	5	27	41	3	2	78	Борцов Борис
8	20	1	20	27	18	86	Булыгин Дмитрий
9	25	18	16	91	96	246	Воронова Екатерина
10	6	6	52	3	32	99	Галдеев Николай
11	9	9	30	13	9	70	Грибов Вадим
12	12	4	100	135	81	332	Давыдов Кирилл
13	17	2	20	39	2	80	Друянов Антон
14	5	18	80	117	9	229	Егорова Елена
15	11	1	52	216	18	298	Егупов Егор
16	8	36	52	27	9	132	Зацепин Марк
17	13	6	8	125	225	377	Исаев Дэни
18	8	9	12	15	8	52	Кабанов Валерий
19	14	5	32	13	8	72	Киреенко Владимир
20	3	16	100	15	98	232	Кириллов Евгений
21	8	5	287	150	400	850	Киселев Михаил
22	5	36	52	18	32	143	Кобзева Ксения
23	5	24	100	27	18	174	Кондин Александр
24	5	36	8	3	9	61	Корчагин Иван
25	5	4	12	3	2	26	Кучуберия Лаша
26	3	20	20	135	18	196	Логвиненко Валентина
27	5	24	41	3	2	75	Логвинов Федор
28	15	5	40	39	8	107	Мацко Ксения
29	5	4	20	6	2	37	Моисеева Анастасия
30	25	45	16	27	9	122	Мусанабиев Магомед
31	10	18	15	100	108	251	Муханов Владислав
32	16	54	65	4	1	140	Никулина Алина
33	5	24	164	294	98	585	Ольмезов Омар
34	13	6	52	6	50	127	Оралбеков Кирилл
35	11	3	164	120	8	306	Охлопкова Зинаида
36	3	24	20	96	32	175	Палагицкий Сергей
37	3	12	20	15	18	68	Перехватов Андрей
38	3	8	12	39	18	80	Пихенько Анна
39	15	4	91	41	25	176	Польшиков Александр
40	5	8	20	39	2	74	Пронин Сергей
41	6	45	40	300	75	466	Росляков Георгий
42	5	24	100	128	256	513	Сирик Елизавета
43	3	36	4	75	50	168	Соловьёв Алексей
44	15	20	30	65	36	166	Стрелков Владислав
45	5	45	100	325	25	500	Суконкин Владислав
46	3	24	20	147	441	635	Тихов Семен
47	24	20	30	225	144	443	Труханов Андрей
48	5	54	52	351	162	624	Урман Никита
49	3	36	12	75	25	151	Фортальнов Степан
50	3	8	20	135	18	184	Хуснияров Альберт
51	8	54	20	15	2	99	Шарчевич Денис
52	8	12	32	24	4	80	Шмакотин Артур
53	16	36	65	25	25	167	Шумилов Алексей
54	5	12	80	160	32	289	Нагорная М.