

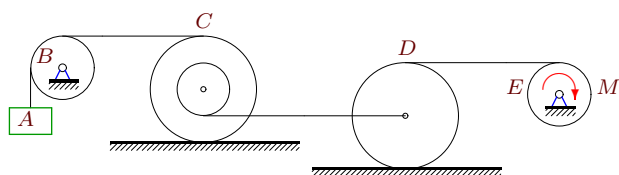
Кинетическая энергия системы. Приведенные массы

Механическая система, состоящая из пяти тел A , B , C , D и E , движется под действием внешних сил. Заданы радиусы цилиндров и блоков. Радиусы инерции 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 $T = \mu v_A^2/2$, где v_A — скорость груза A .

Кирсанов М.Н. **Решebник. Теоретическая механика**/Под ред. А. И. Кириллова.— М.:ФИЗМАТЛИТ, 2008.— 384 с. (с.257.)

Задача 33.1.

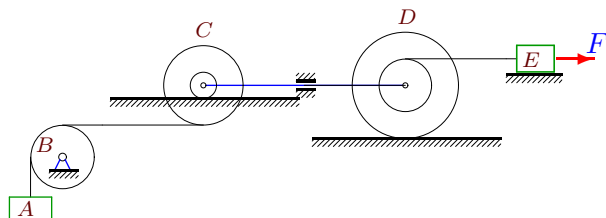
Алиев Самир



$$\begin{aligned} R_C &= 4, r_c = 2, i_C = 3, \\ R_D &= 4, \\ m_A &= 10, m_B = 10, \\ m_C &= 512, m_D = 224, \\ m_E &= 48. \end{aligned}$$

Задача 33.2.

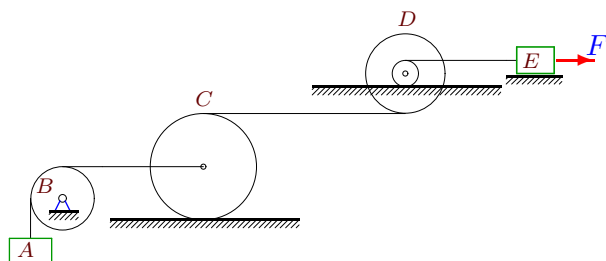
Артёмчик Светлана



$$\begin{aligned} R_C &= 3, r_c = 1, i_C = 2, \\ R_D &= 4, r_D = 2, i_D = 3, \\ m_A &= 14, m_B = 4, \\ m_C &= 16, m_D = 192, \\ m_E &= 32. \end{aligned}$$

Задача 33.3.

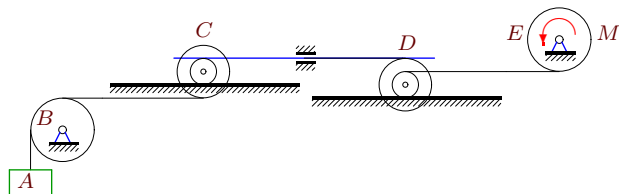
Камов Марат



$$\begin{aligned} R_C &= 4, \\ R_D &= 3, r_D = 1, i_D = 2, \\ m_A &= 17, m_B = 10, \\ m_C &= 14, m_D = 6, \\ m_E &= 5. \end{aligned}$$

Задача 33.4.

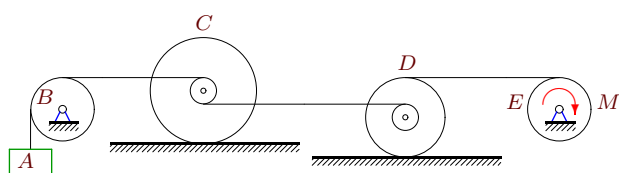
Макаров Александр



$$\begin{aligned} R_C &= 2, r_c = 1, i_C = 1, \\ R_D &= 2, r_D = 1, i_D = 1, \\ m_A &= 20, m_B = 12, \\ m_C &= 7, m_D = 54, \\ m_E &= 90. \end{aligned}$$

Задача 33.5.

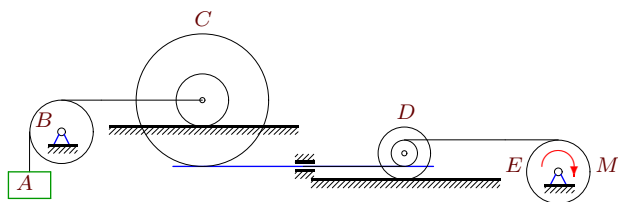
Морозова Мария



$$\begin{aligned} R_C &= 4, r_c = 1, i_C = 3, \\ R_D &= 3, r_D = 1, i_D = 2, \\ m_A &= 10, m_B = 4, \\ m_C &= 7, m_D = 400, \\ m_E &= 200. \end{aligned}$$

Задача 33.6.

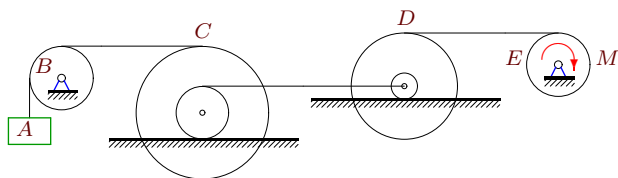
Рожкова Александра



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 2, r_D = 1, i_D = 1, \\ m_A &= 19, m_B = 2, \\ m_C &= 8, m_D = 28, \\ m_E &= 48. \end{aligned}$$

Задача 33.7.

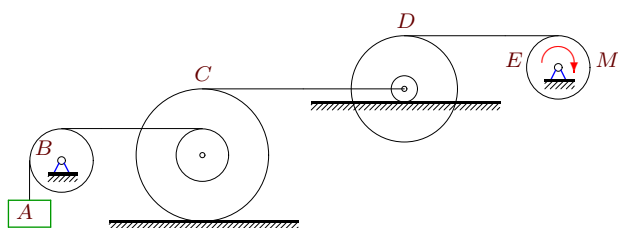
Семерикова Елизавета



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 4, r_D = 1, i_D = 3, \\ m_A &= 16, m_B = 8, \\ m_C &= 294, m_D = 49, \\ m_E &= 98. \end{aligned}$$

Задача 33.8.

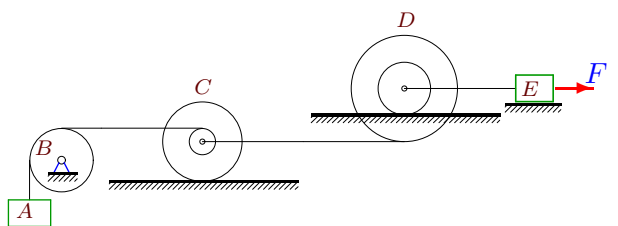
Синадская Ксения



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 4, r_D = 1, i_D = 3, \\ m_A &= 13, m_B = 6, \\ m_C &= 392, m_D = 49, \\ m_E &= 98. \end{aligned}$$

Задача 33.9.

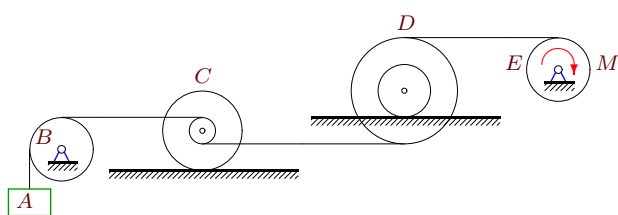
Филареев Степан



$$\begin{aligned} R_C &= 3, r_c = 1, i_C = 2, \\ R_D &= 4, r_D = 2, i_D = 3, \\ m_A &= 17, m_B = 10, \\ m_C &= 112, m_D = 384, \\ m_E &= 80. \end{aligned}$$

Задача 33.10.

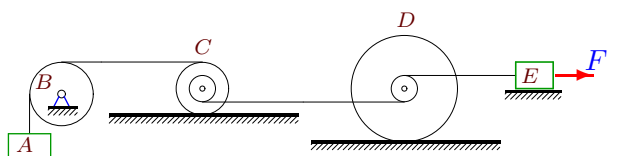
Шейнов Александр



$$\begin{aligned} R_C &= 3, r_c = 1, i_C = 2, \\ R_D &= 4, r_D = 2, i_D = 3, \\ m_A &= 16, m_B = 10, \\ m_C &= 96, m_D = 80, \\ m_E &= 32. \end{aligned}$$

Задача 33.11.

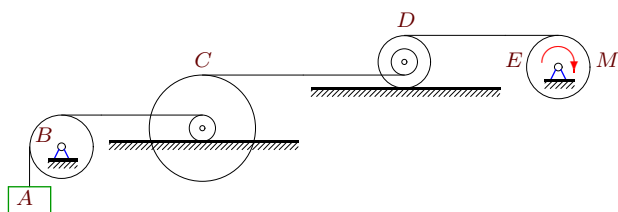
Белявцев Сергей



$$\begin{aligned} R_C &= 2, r_c = 1, i_C = 1, \\ R_D &= 4, r_D = 1, i_D = 3, \\ m_A &= 10, m_B = 8, \\ m_C &= 96, m_D = 144, \\ m_E &= 144. \end{aligned}$$

Задача 33.12.

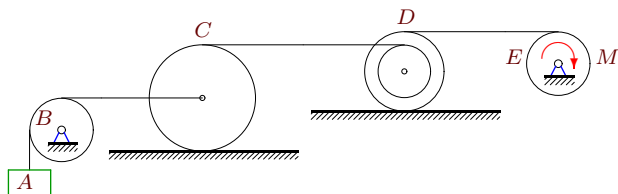
Акимущин Валентин



$$\begin{aligned} R_C &= 4, r_c = 1, i_C = 3, \\ R_D &= 2, r_D = 1, i_D = 1, \\ m_A &= 10, m_B = 2, \\ m_C &= 10, m_D = 4, \\ m_E &= 6. \end{aligned}$$

Задача 33.13.

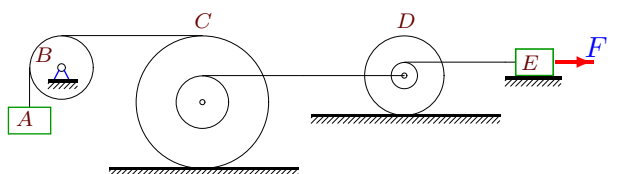
Александров Александр



$$\begin{aligned} R_C &= 4, \\ R_D &= 3, r_D = 2, i_D = 2, \\ m_A &= 6, m_B = 12, \\ m_C &= 10, m_D = 100, \\ m_E &= 50. \end{aligned}$$

Задача 33.14.

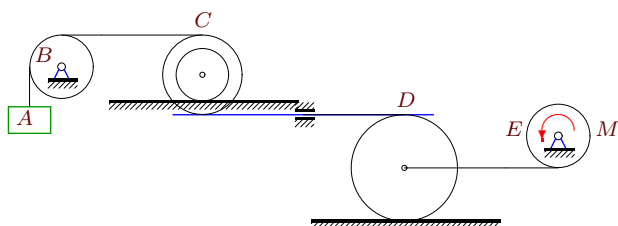
Белов Алексей



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 3, r_D = 1, i_D = 2, \\ m_A &= 9, m_B = 10, \\ m_C &= 100, m_D = 900, \\ m_E &= 225. \end{aligned}$$

Задача 33.15.

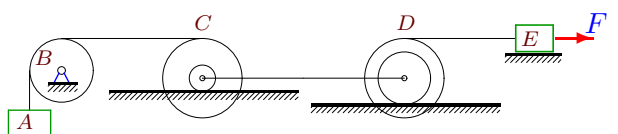
Кудряшова Карина



$$\begin{aligned} R_C &= 3, r_c = 2, i_C = 2, \\ R_D &= 4, \\ m_A &= 13, m_B = 8, \\ m_C &= 125, m_D = 200, \\ m_E &= 200. \end{aligned}$$

Задача 33.16.

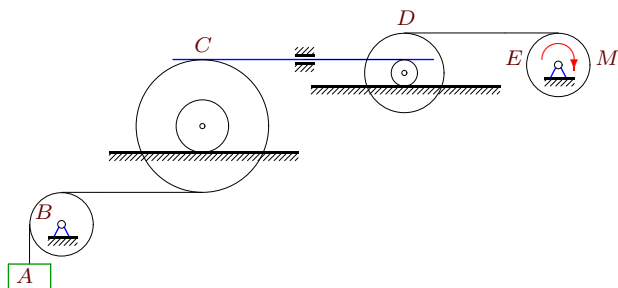
Мешалкин Дмитрий



$$\begin{aligned} R_C &= 3, r_c = 1, i_C = 2, \\ R_D &= 3, r_D = 2, i_D = 2, \\ m_A &= 19, m_B = 12, \\ m_C &= 128, m_D = 56, \\ m_E &= 384. \end{aligned}$$

Задача 33.17.

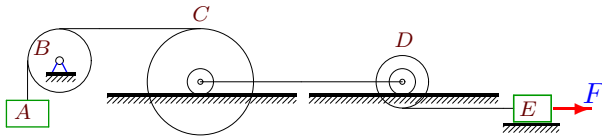
Редькин Дмитрий



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 3, r_D = 1, i_D = 2, \\ m_A &= 15, m_B = 4, \\ m_C &= 36, m_D = 36, \\ m_E &= 18. \end{aligned}$$

Задача 33.18.

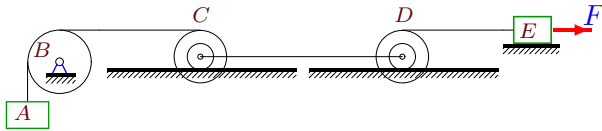
Ефимов Роман



$$\begin{aligned} R_C &= 4, r_c = 1, i_C = 3, \\ R_D &= 2, r_D = 1, i_D = 1, \\ m_A &= 20, m_B = 12, \\ m_C &= 35, m_D = 150, \\ m_E &= 125. \end{aligned}$$

Задача 33.19.

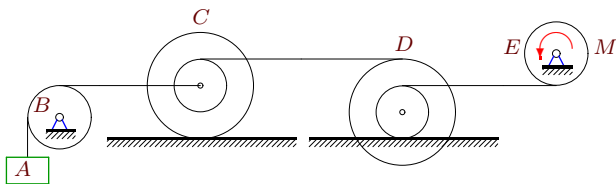
Ковалев Максим



$$\begin{aligned} R_C &= 2, r_c = 1, i_C = 1, \\ R_D &= 2, r_D = 1, i_D = 1, \\ m_A &= 18, m_B = 2, \\ m_C &= 63, m_D = 54, \\ m_E &= 5. \end{aligned}$$

Задача 33.20.

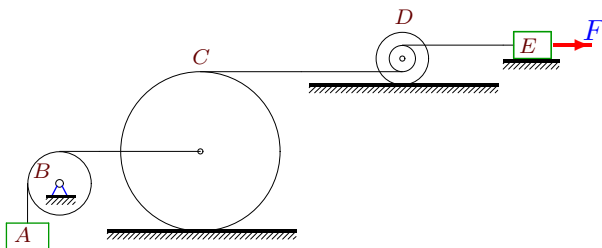
Самаренко Александра



$$\begin{aligned} R_C &= 4, r_c = 2, i_C = 3, \\ R_D &= 4, r_D = 2, i_D = 3, \\ m_A &= 12, m_B = 4, \\ m_C &= 80, m_D = 64, \\ m_E &= 6. \end{aligned}$$

Задача 33.21.

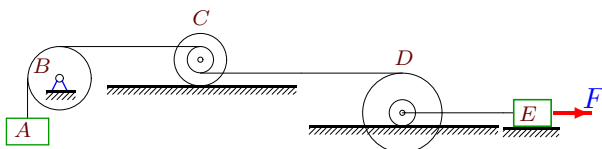
Раченок Андрей



$$\begin{aligned} R_C &= 6, \\ R_D &= 2, r_D = 1, i_D = 1, \\ m_A &= 13, m_B = 2, \\ m_C &= 16, m_D = 7, \\ m_E &= 6. \end{aligned}$$

Задача 33.22.

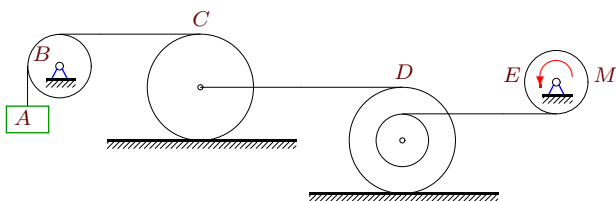
Чакина Татьяна



$$\begin{aligned} R_C &= 2, r_c = 1, i_C = 1, \\ R_D &= 3, r_D = 1, i_D = 2, \\ m_A &= 17, m_B = 4, \\ m_C &= 72, m_D = 144, \\ m_E &= 144. \end{aligned}$$

Задача 33.23.

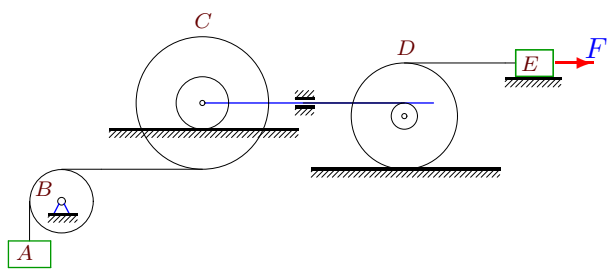
Егоров Павел



$$\begin{aligned} R_C &= 4, \\ R_D &= 4, r_D = 2, i_D = 3, \\ m_A &= 8, m_B = 4, \\ m_C &= 56, m_D = 256, \\ m_E &= 128. \end{aligned}$$

Задача 33.24.

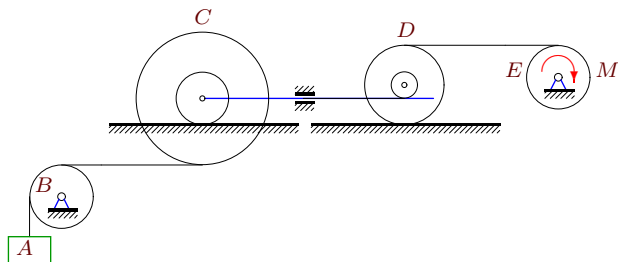
Бутаков Дмитрий



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 4, r_D = 1, i_D = 3, \\ m_A &= 15, m_B = 6, \\ m_C &= 72, m_D = 63, \\ m_E &= 225. \end{aligned}$$

Задача 33.25.

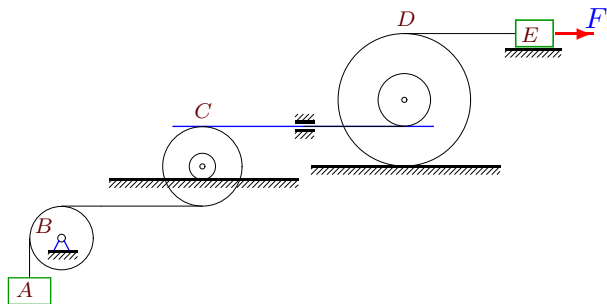
Нахлов Станислав



$$\begin{aligned} R_C &= 5, r_c = 2, i_C = 4, \\ R_D &= 3, r_D = 1, i_D = 2, \\ m_A &= 12, m_B = 4, \\ m_C &= 36, m_D = 27, \\ m_E &= 4. \end{aligned}$$

Задача 33.26.

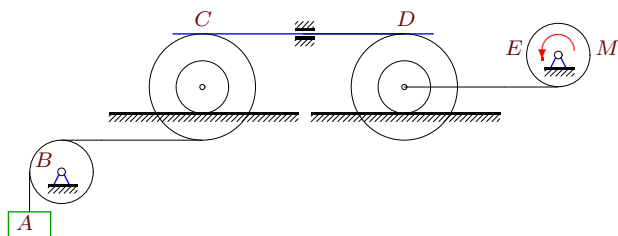
Овчинникова Юлия



$$\begin{aligned} R_C &= 3, r_c = 1, i_C = 2, \\ R_D &= 5, r_D = 2, i_D = 4, \\ m_A &= 14, m_B = 6, \\ m_C &= 28, m_D = 9, \\ m_E &= 9. \end{aligned}$$

Задача 33.27.

Ризаев Владимир



$$\begin{aligned} R_C &= 4, r_c = 2, i_C = 3, \\ R_D &= 4, r_D = 2, i_D = 3, \\ m_A &= 19, m_B = 10, \\ m_C &= 28, m_D = 24, \\ m_E &= 10. \end{aligned}$$