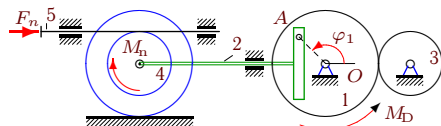


Получить уравнение движения кулисного механизма. Найти значение углового ускорения  $\ddot{\varphi}_1$  при  $t = 0$ .

**Вариант 1**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 14\text{Нм}, k = 12\text{Нмс},$$

$$\nu = 20\text{Нс/м}, \mu = 11\text{Нмс},$$

$$I_1 = 23\text{кгм}^2, m_2 = 18\text{кг},$$

$$m_3 = 36\text{кг}, m_4 = 28\text{кг},$$

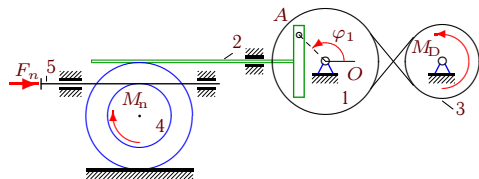
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 17\text{см},$$

$$\varphi_{1,0} = 1.5, \omega_{1z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 2**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 12\text{Нм}, k = 14\text{Нмс},$$

$$\nu = 25\text{Нс/м}, \mu = 12\text{Нмс},$$

$$I_1 = 15\text{кгм}^2, m_2 = 17\text{кг},$$

$$m_3 = 35\text{кг}, m_4 = 27\text{кг},$$

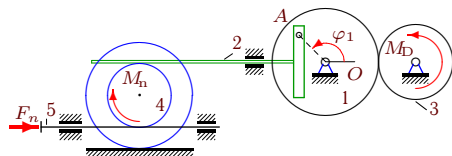
$$R_1 = 37\text{см}, r_1 = 26\text{см},$$

$$R_3 = 27\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 16\text{см},$$

$$\varphi_{1,0} = 1.4, \omega_{1z,0} = 0.4\frac{1}{\text{с}}.$$

**Вариант 3**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 8\text{Нм}, k = 12\text{Нмс},$$

$$\nu = 8\text{Нс/м}, \mu = 13\text{Нмс},$$

$$I_1 = 5\text{кгм}^2, m_2 = 15\text{кг},$$

$$m_3 = 33\text{кг}, m_4 = 25\text{кг},$$

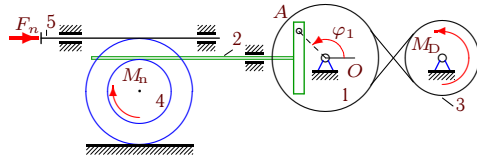
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

$$\varphi_{1,0} = 1.2, \omega_{1z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 4**



$$M_{D_z} = M_0 - k\omega_{3_z},$$

$$M_{n_z} = -\mu\omega_{4_z},$$

$$F_{n_x} = -\nu v_{5_x},$$

$$M_0 = 13\text{Нм}, k = 13\text{Нмс},$$

$$\nu = 10\text{Нс/м}, \mu = 11\text{Нмс},$$

$$I_1 = 18\text{кгм}^2, m_2 = 18\text{кг},$$

$$m_3 = 36\text{кг}, m_4 = 28\text{кг},$$

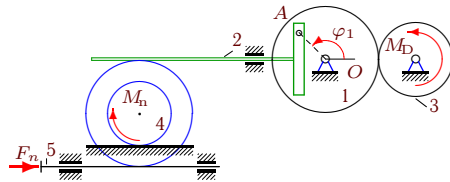
$$R_1 = 36\text{см}, r_1 = 25\text{см},$$

$$R_3 = 26\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 17\text{см},$$

$$\varphi_{1,0} = 1.5, \omega_{1_z,0} = 0.3\frac{1}{\text{с}}.$$

**Вариант 5**



$$M_{D_z} = M_0 - k\omega_{3_z},$$

$$M_{n_z} = -\mu\omega_{4_z},$$

$$F_{n_x} = -\nu v_{5_x},$$

$$M_0 = 11\text{Нм}, k = 13\text{Нмс},$$

$$\nu = 8\text{Нс/м}, \mu = 10\text{Нмс},$$

$$I_1 = 8\text{кгм}^2, m_2 = 18\text{кг},$$

$$m_3 = 36\text{кг}, m_4 = 28\text{кг},$$

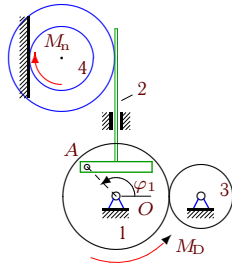
$$R_1 = 36\text{см}, r_1 = 25\text{см},$$

$$R_3 = 26\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 17\text{см},$$

$$\varphi_{1,0} = 1.5, \omega_{1_z,0} = 0.3\frac{1}{\text{с}}.$$

**Вариант 6**



$$M_{D_z} = M_0 - k\omega_{1_z},$$

$$M_{n_z} = -\mu\omega_{4_z},$$

$$M_0 = 11\text{Нм}, k = 12\text{Нмс},$$

$$\mu = 14\text{Нмс},$$

$$I_1 = 11\text{кгм}^2, m_2 = 15\text{кг},$$

$$m_3 = 33\text{кг}, m_4 = 25\text{кг},$$

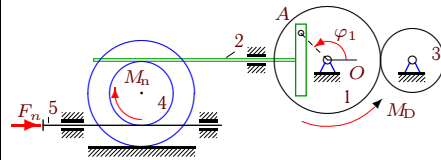
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

$$\varphi_{1,0} = 1.2, \omega_{1_z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 7**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 10 \text{ Нм}, k = 12 \text{ Нмс},$$

$$\nu = 8 \text{ кНс/м}, \mu = 14 \text{ Нмс},$$

$$I_1 = 7 \text{ кгм}^2, m_2 = 14 \text{ кг},$$

$$m_3 = 32 \text{ кг}, m_4 = 24 \text{ кг},$$

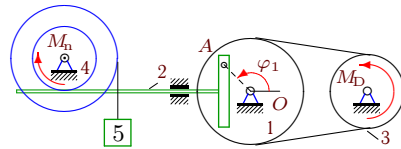
$$R_1 = 35 \text{ см}, r_1 = 24 \text{ см},$$

$$R_3 = 25 \text{ см}, R_4 = 20 \text{ см},$$

$$r_4 = 12 \text{ см}, i_4 = 13 \text{ см},$$

$$\varphi_{1,0} = 1.1, \omega_{1z,0} = 0.2 \frac{1}{\text{с}}.$$

**Вариант 8**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$M_0 = 9 \text{ Нм}, k = 11 \text{ Нмс},$$

$$\mu = 13 \text{ Нмс}, I_1 = 7 \text{ кгм}^2,$$

$$m_2 = 15 \text{ кг}, m_3 = 33 \text{ кг},$$

$$m_4 = 25 \text{ кг}, m_5 = 3 \text{ кг},$$

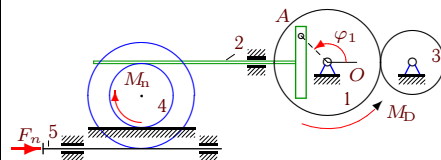
$$R_1 = 34 \text{ см}, r_1 = 23 \text{ см},$$

$$R_3 = 24 \text{ см}, R_4 = 20 \text{ см},$$

$$r_4 = 12 \text{ см}, i_4 = 14 \text{ см},$$

$$\varphi_{1,0} = 1.2, \omega_{1z,0} = 0.1 \frac{1}{\text{с}}.$$

**Вариант 9**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 10 \text{ Нм}, k = 12 \text{ Нмс},$$

$$\nu = 8 \text{ кНс/м}, \mu = 14 \text{ Нмс},$$

$$I_1 = 7 \text{ кгм}^2, m_2 = 14 \text{ кг},$$

$$m_3 = 32 \text{ кг}, m_4 = 24 \text{ кг},$$

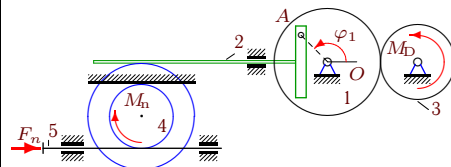
$$R_1 = 35 \text{ см}, r_1 = 24 \text{ см},$$

$$R_3 = 25 \text{ см}, R_4 = 20 \text{ см},$$

$$r_4 = 12 \text{ см}, i_4 = 13 \text{ см},$$

$$\varphi_{1,0} = 1.1, \omega_{1z,0} = 0.2 \frac{1}{\text{с}}.$$

**Вариант 10**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 10\text{Нм}, k = 12\text{Нмс},$$

$$\nu = 40\text{Нс/м}, \mu = 11\text{Нмс},$$

$$I_1 = 7\text{кгм}^2, m_2 = 17\text{кг},$$

$$m_3 = 35\text{кг}, m_4 = 27\text{кг},$$

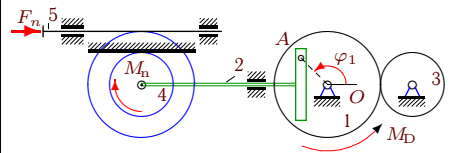
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 16\text{см},$$

$$\varphi_{1,0} = 1.4, \omega_{1z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 11**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 13\text{Нм}, k = 13\text{Нмс},$$

$$\nu = 8\text{кНс/м}, \mu = 12\text{Нмс},$$

$$I_1 = 19\text{кгм}^2, m_2 = 17\text{кг},$$

$$m_3 = 35\text{кг}, m_4 = 27\text{кг},$$

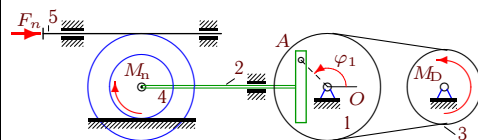
$$R_1 = 36\text{см}, r_1 = 25\text{см},$$

$$R_3 = 26\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 16\text{см},$$

$$\varphi_{1,0} = 1.4, \omega_{1z,0} = 0.3\frac{1}{\text{с}}.$$

**Вариант 12**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 9\text{Нм}, k = 15\text{Нмс},$$

$$\nu = 35\text{Нс/м}, \mu = 14\text{Нмс},$$

$$I_1 = 7\text{кгм}^2, m_2 = 15\text{кг},$$

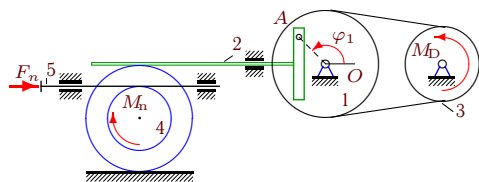
$$m_3 = 33\text{кг}, m_4 = 25\text{кг},$$

$$R_1 = 38\text{см}, r_1 = 27\text{см},$$

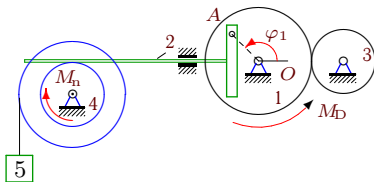
$$R_3 = 28\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

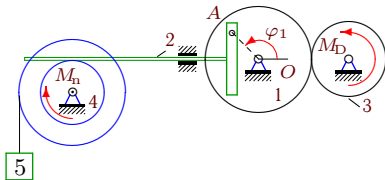
$$\varphi_{1,0} = 1.2, \omega_{1z,0} = 0.5\frac{1}{\text{с}}.$$

**Вариант 13**

$$\begin{aligned}
 M_{D_z} &= M_0 - k\omega_{3_z}, \\
 M_{n_z} &= -\mu\omega_{4_z}, \\
 F_{n_x} &= -\nu v_{5_x}, \\
 M_0 &= 10\text{Нм}, k = 12\text{Нмс}, \\
 \nu &= 30\text{Нс/м}, \mu = 13\text{Нмс}, \\
 I_1 &= 9\text{кгм}^2, m_2 = 16\text{кг}, \\
 m_3 &= 34\text{кг}, m_4 = 26\text{кг}, \\
 R_1 &= 35\text{см}, r_1 = 24\text{см}, \\
 R_3 &= 25\text{см}, R_4 = 20\text{см}, \\
 r_4 &= 12\text{см}, i_4 = 15\text{см}, \\
 \varphi_{1,0} &= 1.3, \omega_{1_z,0} = 0.2\frac{1}{\text{с}}.
 \end{aligned}$$

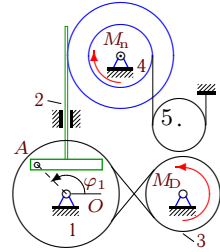
**Вариант 14**

$$\begin{aligned}
 M_{D_z} &= M_0 - k\omega_{1_z}, \\
 M_{n_z} &= -\mu\omega_{4_z}, \\
 M_0 &= 10\text{Нм}, k = 15\text{Нмс}, \\
 \mu &= 14\text{Нмс}, I_1 = 7\text{кгм}^2, \\
 m_2 &= 14\text{кг}, m_3 = 32\text{кг}, \\
 m_4 &= 24\text{кг}, m_5 = 4\text{кг}, \\
 R_1 &= 38\text{см}, r_1 = 27\text{см}, \\
 R_3 &= 28\text{см}, R_4 = 20\text{см}, \\
 r_4 &= 12\text{см}, i_4 = 13\text{см}, \\
 \varphi_{1,0} &= 1.1, \omega_{1_z,0} = 0.5\frac{1}{\text{с}}.
 \end{aligned}$$

**Вариант 15**

$$\begin{aligned}
 M_{D_z} &= M_0 - k\omega_{3_z}, \\
 M_{n_z} &= -\mu\omega_{4_z}, \\
 M_0 &= 9\text{Нм}, k = 14\text{Нмс}, \\
 \mu &= 12\text{Нмс}, I_1 = 6\text{кгм}^2, \\
 m_2 &= 16\text{кг}, m_3 = 34\text{кг}, \\
 m_4 &= 26\text{кг}, m_5 = 3\text{кг}, \\
 R_1 &= 37\text{см}, r_1 = 26\text{см}, \\
 R_3 &= 27\text{см}, R_4 = 20\text{см}, \\
 r_4 &= 12\text{см}, i_4 = 15\text{см}, \\
 \varphi_{1,0} &= 1.3, \omega_{1_z,0} = 0.4\frac{1}{\text{с}}.
 \end{aligned}$$

**Вариант 16**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$M_0 = 9\text{Нм}, k = 12\text{Нмс},$$

$$\mu = 15\text{Нмс}, I_1 = 6\text{кгм}^2,$$

$$m_2 = 14\text{кг}, m_3 = 32\text{кг},$$

$$m_4 = 24\text{кг}, m_5 = 4\text{кг},$$

$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

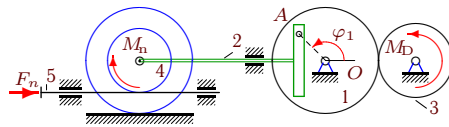
$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 13\text{см},$$

$$r_5 = 12\text{см},$$

$$\varphi_{1,0} = 1.1, \omega_{1z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 17**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 10\text{Нм}, k = 13\text{Нмс},$$

$$\nu = 8\text{кНс/м}, \mu = 11\text{Нмс},$$

$$I_1 = 7\text{кгм}^2, m_2 = 17\text{кг},$$

$$m_3 = 35\text{кг}, m_4 = 27\text{кг},$$

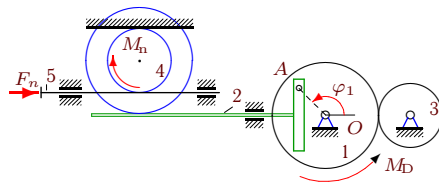
$$R_1 = 36\text{см}, r_1 = 25\text{см},$$

$$R_3 = 26\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 16\text{см},$$

$$\varphi_{1,0} = 1.4, \omega_{1z,0} = 0.3\frac{1}{\text{с}}.$$

**Вариант 18**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 14\text{Нм}, k = 14\text{Нмс},$$

$$\nu = 35\text{Нс/м}, \mu = 11\text{Нмс},$$

$$I_1 = 23\text{кгм}^2, m_2 = 18\text{кг},$$

$$m_3 = 36\text{кг}, m_4 = 28\text{кг},$$

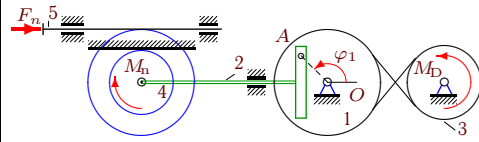
$$R_1 = 37\text{см}, r_1 = 26\text{см},$$

$$R_3 = 27\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 17\text{см},$$

$$\varphi_{1,0} = 1.5, \omega_{1z,0} = 0.4\frac{1}{\text{с}}.$$

**Вариант 19**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 10\text{Нм}, k = 11\text{Нмс},$$

$$\nu = 8\text{кНс/м}, \mu = 14\text{Нмс},$$

$$I_1 = 9\text{кгм}^2, m_2 = 15\text{кг},$$

$$m_3 = 33\text{кг}, m_4 = 25\text{кг},$$

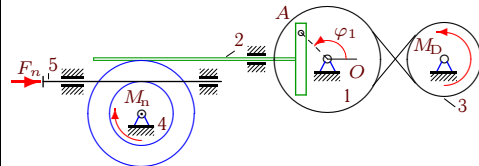
$$R_1 = 34\text{см}, r_1 = 23\text{см},$$

$$R_3 = 24\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

$$\varphi_{1,0} = 1.2, \omega_{1z,0} = 0.1\frac{1}{\text{с}}.$$

**Вариант 20**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 11\text{Нм}, k = 14\text{Нмс},$$

$$\nu = 30\text{Нс/м}, \mu = 13\text{Нмс},$$

$$I_1 = 12\text{кгм}^2, m_2 = 16\text{кг},$$

$$m_3 = 34\text{кг}, m_4 = 26\text{кг},$$

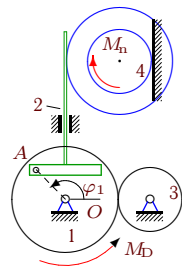
$$R_1 = 37\text{см}, r_1 = 26\text{см},$$

$$R_3 = 27\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 15\text{см},$$

$$\varphi_{1,0} = 1.3, \omega_{1z,0} = 0.4\frac{1}{\text{с}}.$$

**Вариант 21**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$M_0 = 12\text{Нм}, k = 14\text{Нмс},$$

$$\mu = 13\text{Нмс},$$

$$I_1 = 15\text{кгм}^2, m_2 = 16\text{кг},$$

$$m_3 = 34\text{кг}, m_4 = 26\text{кг},$$

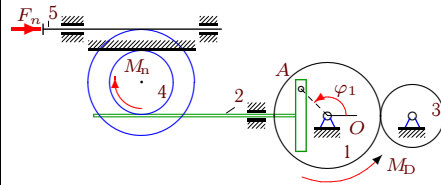
$$R_1 = 37\text{см}, r_1 = 26\text{см},$$

$$R_3 = 27\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 15\text{см},$$

$$\varphi_{1,0} = 1.3, \omega_{1z,0} = 0.4\frac{1}{\text{с}}.$$

**Вариант 22**



$$M_{Dz} = M_0 - k\omega_{1z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 13\text{Нм}, k = 11\text{Нмс},$$

$$\nu = 8\text{кНс/м}, \mu = 11\text{Нмс},$$

$$I_1 = 19\text{кгм}^2, m_2 = 17\text{кг},$$

$$m_3 = 35\text{кг}, m_4 = 27\text{кг},$$

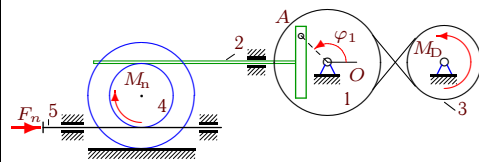
$$R_1 = 34\text{см}, r_1 = 23\text{см},$$

$$R_3 = 24\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 16\text{см},$$

$$\varphi_{1,0} = 1.4, \omega_{1z,0} = 0.1\frac{1}{\text{с}}.$$

**Вариант 23**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 10\text{Нм}, k = 14\text{Нмс},$$

$$\nu = 8\text{кНс/м}, \mu = 13\text{Нмс},$$

$$I_1 = 9\text{кгм}^2, m_2 = 15\text{кг},$$

$$m_3 = 33\text{кг}, m_4 = 25\text{кг},$$

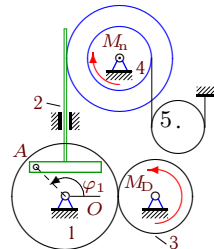
$$R_1 = 37\text{см}, r_1 = 26\text{см},$$

$$R_3 = 27\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

$$\varphi_{1,0} = 1.2, \omega_{1z,0} = 0.4\frac{1}{\text{с}}.$$

**Вариант 24**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$M_0 = 8\text{Нм}, k = 15\text{Нмс},$$

$$\mu = 14\text{Нмс}, I_1 = 5\text{кгм}^2,$$

$$m_2 = 15\text{кг}, m_3 = 33\text{кг},$$

$$m_4 = 25\text{кг}, m_5 = 3\text{кг},$$

$$R_1 = 38\text{см}, r_1 = 27\text{см},$$

$$R_3 = 28\text{см}, R_4 = 20\text{см},$$

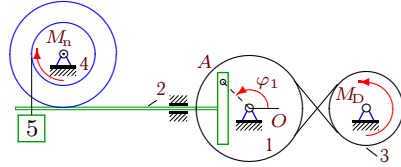
$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

$$r_5 = 10\text{см},$$

$$\varphi_{1,0} = 1.2, \omega_{1z,0} = 0.5\frac{1}{\text{с}}.$$



**Вариант 25**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$M_0 = 11\text{Нм}, k = 12\text{Нмс},$$

$$\mu = 13\text{Нмс}, I_1 = 12\text{кгм}^2,$$

$$m_2 = 16\text{кг}, m_3 = 34\text{кг},$$

$$m_4 = 26\text{кг}, m_5 = 6\text{кг},$$

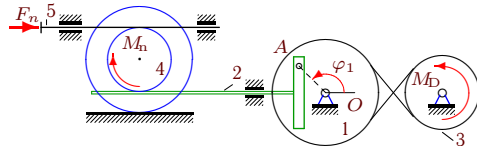
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 15\text{см},$$

$$\varphi_{1,0} = 1.3, \omega_{1z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 26**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 13\text{Нм}, k = 12\text{Нмс},$$

$$\nu = 20\text{Нс/м}, \mu = 10\text{Нмс},$$

$$I_1 = 18\text{кгм}^2, m_2 = 18\text{кг},$$

$$m_3 = 36\text{кг}, m_4 = 28\text{кг},$$

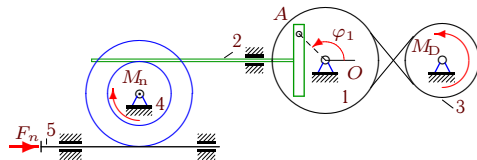
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 17\text{см},$$

$$\varphi_{1,0} = 1.5, \omega_{1z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 27**



$$M_{Dz} = M_0 - k\omega_{3z},$$

$$M_{nz} = -\mu\omega_{4z},$$

$$F_{nx} = -\nu v_{5x},$$

$$M_0 = 11\text{Нм}, k = 14\text{Нмс},$$

$$\nu = 8\text{Нс/м}, \mu = 12\text{Нмс},$$

$$I_1 = 12\text{кгм}^2, m_2 = 16\text{кг},$$

$$m_3 = 34\text{кг}, m_4 = 26\text{кг},$$

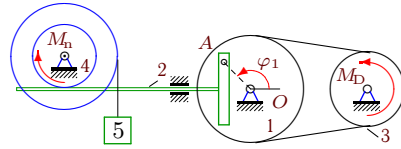
$$R_1 = 37\text{см}, r_1 = 26\text{см},$$

$$R_3 = 27\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 15\text{см},$$

$$\varphi_{1,0} = 1.3, \omega_{1z,0} = 0.4\frac{1}{\text{с}}.$$

**Вариант 28**



$$M_{D_z} = M_0 - k\omega_{3_z},$$

$$M_{n_z} = -\mu\omega_{4_z},$$

$$M_0 = 11\text{Нм}, k = 12\text{Нмс},$$

$$\mu = 11\text{Нмс}, I_1 = 11\text{кгм}^2,$$

$$m_2 = 17\text{кг}, m_3 = 35\text{кг},$$

$$m_4 = 27\text{кг}, m_5 = 5\text{кг},$$

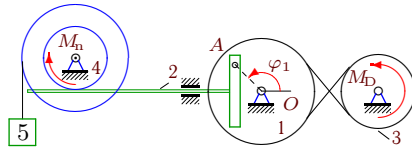
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 16\text{см},$$

$$\varphi_{1,0} = 1.4, \omega_{1_z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 29**



$$M_{D_z} = M_0 - k\omega_{3_z},$$

$$M_{n_z} = -\mu\omega_{4_z},$$

$$M_0 = 10\text{Нм}, k = 12\text{Нмс},$$

$$\mu = 13\text{Нмс}, I_1 = 9\text{кгм}^2,$$

$$m_2 = 15\text{кг}, m_3 = 33\text{кг},$$

$$m_4 = 25\text{кг}, m_5 = 4\text{кг},$$

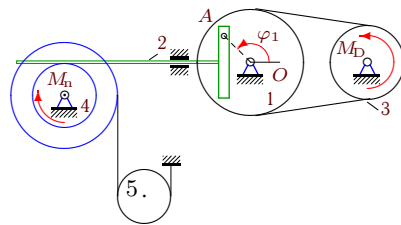
$$R_1 = 35\text{см}, r_1 = 24\text{см},$$

$$R_3 = 25\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 14\text{см},$$

$$\varphi_{1,0} = 1.2, \omega_{1_z,0} = 0.2\frac{1}{\text{с}}.$$

**Вариант 30**



$$M_{D_z} = M_0 - k\omega_{3_z},$$

$$M_{n_z} = -\mu\omega_{4_z},$$

$$M_0 = 12\text{Нм}, k = 15\text{Нмс},$$

$$\mu = 10\text{Нмс}, I_1 = 13\text{кгм}^2,$$

$$m_2 = 18\text{кг}, m_3 = 36\text{кг},$$

$$m_4 = 28\text{кг}, m_5 = 6\text{кг},$$

$$R_1 = 38\text{см}, r_1 = 27\text{см},$$

$$R_3 = 28\text{см}, R_4 = 20\text{см},$$

$$r_4 = 12\text{см}, i_4 = 17\text{см},$$

$$r_5 = 11\text{см},$$

$$\varphi_{1,0} = 1.5, \omega_{1_z,0} = 0.5\frac{1}{\text{с}}.$$

Ответы

$$T = (\dot{\varphi}^2/2)(A + B \sin^2 \varphi)$$

	<i>A</i>	<i>B</i>	<i>Q</i>	$\varepsilon$
1	25.205	3.815	7.861	0.271
2	17.396	1.898	-29.350	-1.528
3	7.021	1.702	-22.178	-2.612
4	20.333	2.302	-27.773	-1.228
5	10.333	1.865	-33.858	-2.779
6	13.021	1.342	-12.402	-0.938
7	8.960	1.575	1.774	0.171
8	8.907	3.034	16.909	1.464
9	8.960	1.558	-2.757	-0.273
10	9.144	10.699	-41.959	-2.152
11	21.268	5.750	-70.814	-2.640
12	9.383	5.397	-40.265	-2.894
13	11.083	1.507	8.222	0.657
14	9.310	3.884	-9.909	-0.831
15	8.327	4.391	-31.482	-2.553
16	7.960	1.422	-31.863	-3.858
17	9.268	3.830	-49.637	-3.826
18	25.464	2.017	4.980	0.180
19	10.907	3.916	-37.181	-2.599
20	14.327	1.768	-28.112	-1.765
21	17.327	1.715	-11.414	-0.650
22	21.023	1.891	6.353	0.278
23	11.259	1.998	-38.947	-3.006
24	7.383	2.016	-39.879	-5.192
25	14.083	1.888	-31.747	-2.006
26	20.205	18.400	-44.482	-1.156
27	14.327	2.208	-53.136	-3.250
28	13.144	4.544	21.485	1.222
29	11.021	3.464	-42.368	-3.023
30	15.599	5.867	-35.264	-1.650