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

**Вариант 1**
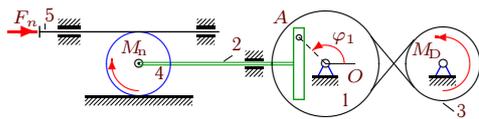


$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 10$Нм, $k = 11$Нмс,
$\nu = 50$Нс/м, $\mu = 14$Нмс,
$I_1 = 9$кгм$^2$, $m_2 = 15$кг,
$m_3 = 33$кг, $m_4 = 25$кг,
$R_1 = 34$см, $r_1 = 23$см,
$R_3 = 24$см, $R_4 = 12$см,
$\varphi_{1,0} = 1.2$, $\omega_{1_z,0} = 0.1\frac{1}{c}$.
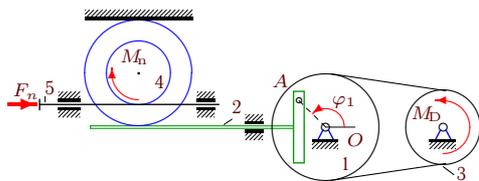
**Вариант 2**



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 11$Нм, $k = 14$Нмс,
$\nu = 25$Нс/м, $\mu = 12$Нмс,
$I_1 = 11$кгм$^2$, $m_2 = 17$кг,
$m_3 = 35$кг, $m_4 = 27$кг,
$R_1 = 37$см, $r_1 = 26$см,
$R_3 = 27$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 16$см,
$\varphi_{1,0} = 1.4$, $\omega_{1_z,0} = 0.4\frac{1}{c}$.
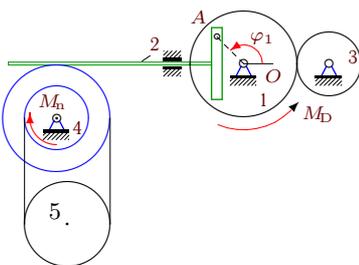
**Вариант 3**



$M_{D_z} = M_0 - k\omega_{1_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 10$Нм, $k = 12$Нмс,
$\mu = 15$Нмс, $I_1 = 7$кгм$^2$,
$m_2 = 14$кг, $m_3 = 32$кг,
$m_4 = 24$кг, $m_5 = 50$кг,
$R_1 = 35$см, $r_1 = 24$см,
$R_3 = 25$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$r_5 = 16$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
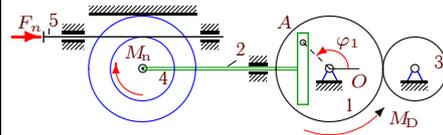
## Вариант 4



$M_{D_z} = M_0 - k\omega_{1_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 13$Нм, $k = 14$Нмс,
$\nu = 8$кНс/м, $\mu = 12$Нмс,
$I_1 = 19$кгм$^2$, $m_2 = 17$кг,
$m_3 = 35$кг, $m_4 = 27$кг,
$R_1 = 37$см, $r_1 = 26$см,
$R_3 = 27$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 16$см,
$\varphi_{1,0} = 1.4$, $\omega_{1_z,0} = 0.4\frac{1}{c}$.
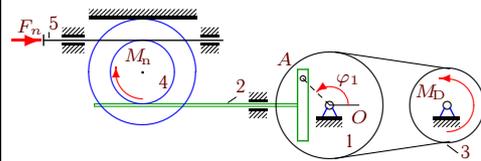
## Вариант 5



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 8$Нм, $k = 14$Нмс,
$\nu = 8$кНс/м, $\mu = 14$Нмс,
$I_1 = 5$кгм$^2$, $m_2 = 14$кг,
$m_3 = 32$кг, $m_4 = 24$кг,
$R_1 = 37$см, $r_1 = 26$см,
$R_3 = 27$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.4\frac{1}{c}$.
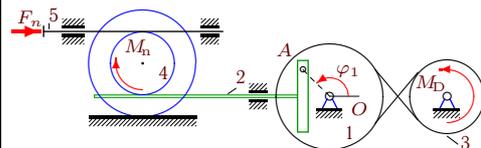
## Вариант 6



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 9$Нм, $k = 13$Нмс,
$\nu = 40$Нс/м, $\mu = 14$Нмс,
$I_1 = 6$кгм$^2$, $m_2 = 14$кг,
$m_3 = 32$кг, $m_4 = 24$кг,
$R_1 = 36$см, $r_1 = 25$см,
$R_3 = 26$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.3\frac{1}{c}$.
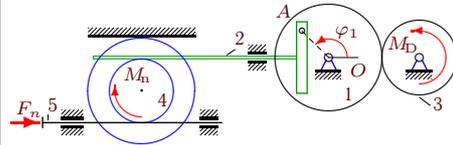
## Вариант 7

$M_{D_z} = M_0 - k\omega_{3_z},$
$M_{n_z} = -\mu\omega_{4_z},$
$F_{n_x} = -\nu v_{5_x},$
$M_0 = 10\text{Нм}, k = 11\text{Нмс},$
$\nu = 25\text{Нс/м}, \mu = 11\text{Нмс},$
$I_1 = 7\text{кгм}^2, m_2 = 17\text{кг},$
$m_3 = 35\text{кг}, m_4 = 27\text{кг},$
$R_1 = 34\text{см}, r_1 = 23\text{см},$
$R_3 = 24\text{см}, R_4 = 20\text{см},$
$r_4 = 12\text{см}, i_4 = 16\text{см},$
$\varphi_{1,0} = 1.4, \omega_{1_z,0} = 0.1\frac{1}{c}.$
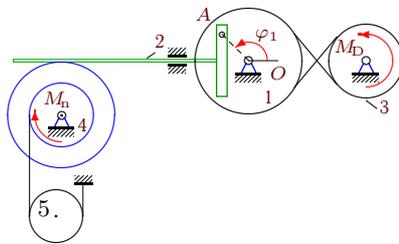
## Вариант 8

$M_{D_z} = M_0 - k\omega_{3_z},$
$M_{n_z} = -\mu\omega_{4_z},$
$M_0 = 12\text{Нм}, k = 13\text{Нмс},$
$\mu = 12\text{Нмс}, I_1 = 15\text{кгм}^2,$
$m_2 = 17\text{кг}, m_3 = 35\text{кг},$
$m_4 = 27\text{кг}, m_5 = 7\text{кг},$
$R_1 = 36\text{см}, r_1 = 25\text{см},$
$R_3 = 26\text{см}, R_4 = 20\text{см},$
$r_4 = 12\text{см}, i_4 = 16\text{см},$
$r_5 = 12\text{см},$
$\varphi_{1,0} = 1.4, \omega_{1_z,0} = 0.3\frac{1}{c}.$
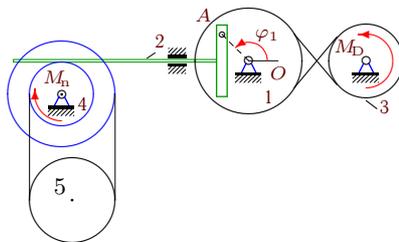
## Вариант 9

$M_{D_z} = M_0 - k\omega_{3_z},$
$M_{n_z} = -\mu\omega_{4_z},$
$M_0 = 11\text{Нм}, k = 11\text{Нмс},$
$\mu = 12\text{Нмс}, I_1 = 12\text{кгм}^2,$
$m_2 = 16\text{кг}, m_3 = 34\text{кг},$
$m_4 = 26\text{кг}, m_5 = 50\text{кг},$
$R_1 = 34\text{см}, r_1 = 23\text{см},$
$R_3 = 24\text{см}, R_4 = 20\text{см},$
$r_4 = 12\text{см}, i_4 = 15\text{см},$
$r_5 = 16\text{см},$
$\varphi_{1,0} = 1.3, \omega_{1_z,0} = 0.1\frac{1}{c}.$
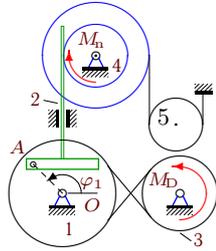
## Вариант 10



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 13$Нм, $k = 14$Нмс,
$\mu = 10$Нмс, $I_1 = 18$кгм$^2$,
$m_2 = 18$кг, $m_3 = 36$кг,
$m_4 = 28$кг, $m_5 = 7$кг,
$R_1 = 37$см, $r_1 = 26$см,
$R_3 = 27$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 17$см,
$r_5 = 12$см,
$\varphi_{1,0} = 1.5$, $\omega_{1_z,0} = 0.4\frac{1}{c}$.
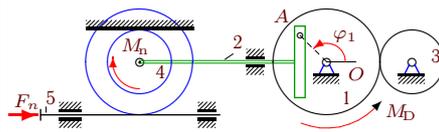
## Вариант 11



$M_{D_z} = M_0 - k\omega_{1_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 10$Нм, $k = 11$Нмс,
$\nu = 40$Нс/м, $\mu = 14$Нмс,
$I_1 = 7$кгм$^2$, $m_2 = 14$кг,
$m_3 = 32$кг, $m_4 = 24$кг,
$R_1 = 34$см, $r_1 = 23$см,
$R_3 = 24$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.1\frac{1}{c}$.
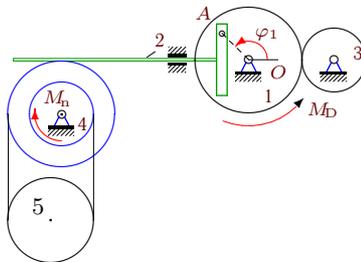
## Вариант 12



$M_{D_z} = M_0 - k\omega_{1_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 10$Нм, $k = 12$Нмс,
$\mu = 15$Нмс, $I_1 = 7$кгм$^2$,
$m_2 = 14$кг, $m_3 = 32$кг,
$m_4 = 24$кг, $m_5 = 50$кг,
$R_1 = 35$см, $r_1 = 24$см,
$R_3 = 25$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$r_5 = 16$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
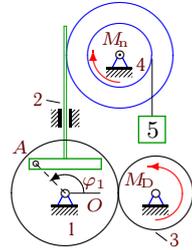
## Вариант 13

$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 11$Нм, $k = 12$Нмс,
$\mu = 11$Нмс, $I_1 = 8$кгм$^2$,
$m_2 = 18$кг, $m_3 = 36$кг,
$m_4 = 28$кг, $m_5 = 6$кг,
$R_1 = 35$см, $r_1 = 24$см,
$R_3 = 25$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 17$см,
$\varphi_{1,0} = 1.5$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
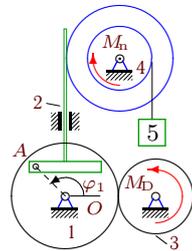
## Вариант 14

$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 9$Нм, $k = 14$Нмс,
$\mu = 13$Нмс, $I_1 = 6$кгм$^2$,
$m_2 = 16$кг, $m_3 = 34$кг,
$m_4 = 26$кг, $m_5 = 4$кг,
$R_1 = 37$см, $r_1 = 26$см,
$R_3 = 27$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 15$см,
$\varphi_{1,0} = 1.3$, $\omega_{1_z,0} = 0.4\frac{1}{c}$.
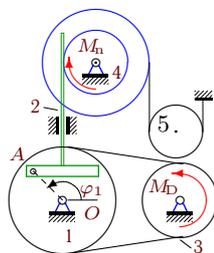
## Вариант 15

$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 10$Нм, $k = 13$Нмс,
$\mu = 12$Нмс, $I_1 = 9$кгм$^2$,
$m_2 = 16$кг, $m_3 = 34$кг,
$m_4 = 26$кг, $m_5 = 4$кг,
$R_1 = 36$см, $r_1 = 25$см,
$R_3 = 26$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 15$см,
$r_5 = 11$см,
$\varphi_{1,0} = 1.3$, $\omega_{1_z,0} = 0.3\frac{1}{c}$.
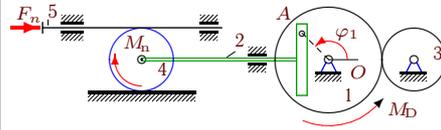
## Вариант 16



$M_{D_z} = M_0 - k\omega_{1_z},$
$M_{n_z} = -\mu\omega_{4_z},$
$F_{n_x} = -\nu v_{5_x},$
$M_0 = 13\text{Нм}, \ k = 13\text{Нмс},$
$\nu = 40\text{Нс/м}, \ \mu = 12\text{Нмс},$
$I_1 = 19\text{кгм}^2, \ m_2 = 17\text{кг},$
$m_3 = 35\text{кг}, \ m_4 = 27\text{кг},$
$R_1 = 36\text{см}, \ r_1 = 25\text{см},$
$R_3 = 26\text{см}, \ R_4 = 12\text{см},$
$\varphi_{1,0} = 1.4, \ \omega_{1_z,0} = 0.3\tfrac{1}{c}.$
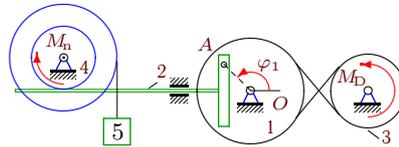
## Вариант 17



$M_{D_z} = M_0 - k\omega_{3_z},$
$M_{n_z} = -\mu\omega_{4_z},$
$M_0 = 11\text{Нм}, \ k = 11\text{Нмс},$
$\mu = 12\text{Нмс}, \ I_1 = 12\text{кгм}^2,$
$m_2 = 16\text{кг}, \ m_3 = 34\text{кг},$
$m_4 = 26\text{кг}, \ m_5 = 5\text{кг},$
$R_1 = 34\text{см}, \ r_1 = 23\text{см},$
$R_3 = 24\text{см}, \ R_4 = 20\text{см},$
$r_4 = 12\text{см}, \ i_4 = 15\text{см},$
$\varphi_{1,0} = 1.3, \ \omega_{1_z,0} = 0.1\tfrac{1}{c}.$
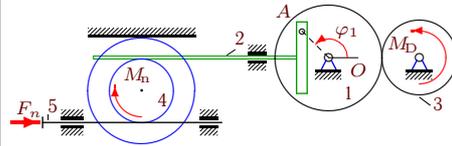
## Вариант 18



$M_{D_z} = M_0 - k\omega_{3_z},$
$M_{n_z} = -\mu\omega_{4_z},$
$F_{n_x} = -\nu v_{5_x},$
$M_0 = 8\text{Нм}, \ k = 14\text{Нмс},$
$\nu = 35\text{Нс/м}, \ \mu = 13\text{Нмс},$
$I_1 = 5\text{кгм}^2, \ m_2 = 15\text{кг},$
$m_3 = 33\text{кг}, \ m_4 = 25\text{кг},$
$R_1 = 37\text{см}, \ r_1 = 26\text{см},$
$R_3 = 27\text{см}, \ R_4 = 20\text{см},$
$r_4 = 12\text{см}, \ i_4 = 14\text{см},$
$\varphi_{1,0} = 1.2, \ \omega_{1_z,0} = 0.4\tfrac{1}{c}.$
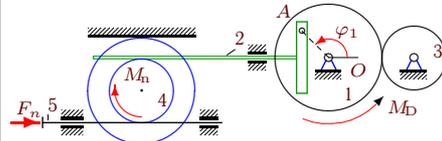
## Вариант 19



$M_{D_z} = M_0 - k\omega_{1_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 10\text{Нм}$, $k = 15\text{Нмс}$,
$\nu = 40\text{Нс/м}$, $\mu = 14\text{Нмс}$,
$I_1 = 7\text{кгм}^2$, $m_2 = 14\text{кг}$,
$m_3 = 32\text{кг}$, $m_4 = 24\text{кг}$,
$R_1 = 38\text{см}$, $r_1 = 27\text{см}$,
$R_3 = 28\text{см}$, $R_4 = 20\text{см}$,
$r_4 = 12\text{см}$, $i_4 = 13\text{см}$,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.5\frac{1}{c}$.
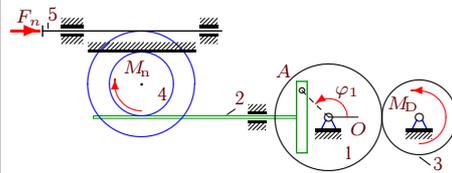
## Вариант 20



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 9\text{Нм}$, $k = 12\text{Нмс}$,
$\nu = 8\text{кНс/м}$, $\mu = 12\text{Нмс}$,
$I_1 = 6\text{кгм}^2$, $m_2 = 16\text{кг}$,
$m_3 = 34\text{кг}$, $m_4 = 26\text{кг}$,
$R_1 = 35\text{см}$, $r_1 = 24\text{см}$,
$R_3 = 25\text{см}$, $R_4 = 20\text{см}$,
$r_4 = 12\text{см}$, $i_4 = 15\text{см}$,
$\varphi_{1,0} = 1.3$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
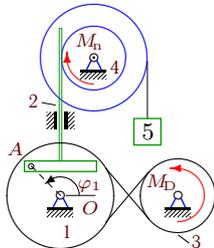
## Вариант 21



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 11\text{Нм}$, $k = 12\text{Нмс}$,
$\mu = 12\text{Нмс}$, $I_1 = 12\text{кгм}^2$,
$m_2 = 16\text{кг}$, $m_3 = 34\text{кг}$,
$m_4 = 26\text{кг}$, $m_5 = 5\text{кг}$,
$R_1 = 35\text{см}$, $r_1 = 24\text{см}$,
$R_3 = 25\text{см}$, $R_4 = 20\text{см}$,
$r_4 = 12\text{см}$, $i_4 = 15\text{см}$,
$\varphi_{1,0} = 1.3$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
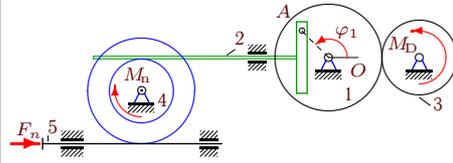
## Вариант 22



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 11$Нм, $k = 15$Нмс,
$\nu = 8$кНс/м, $\mu = 10$Нмс,
$I_1 = 8$кгм$^2$, $m_2 = 18$кг,
$m_3 = 36$кг, $m_4 = 28$кг,
$R_1 = 38$см, $r_1 = 27$см,
$R_3 = 28$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 17$см,
$\varphi_{1,0} = 1.5$, $\omega_{1_z,0} = 0.5\frac{1}{c}$.
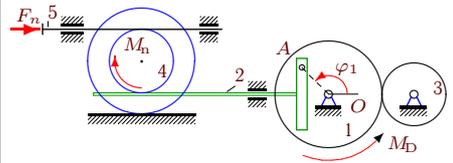
## Вариант 23



$M_{D_z} = M_0 - k\omega_{1_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 11$Нм, $k = 15$Нмс,
$\nu = 35$Нс/м, $\mu = 13$Нмс,
$I_1 = 11$кгм$^2$, $m_2 = 15$кг,
$m_3 = 33$кг, $m_4 = 25$кг,
$R_1 = 38$см, $r_1 = 27$см,
$R_3 = 28$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 14$см,
$\varphi_{1,0} = 1.2$, $\omega_{1_z,0} = 0.5\frac{1}{c}$.
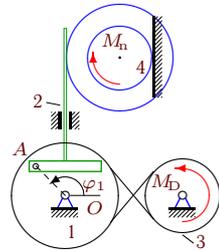
## Вариант 24



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 9$Нм, $k = 11$Нмс,
$\mu = 15$Нмс,
$I_1 = 6$кгм$^2$, $m_2 = 14$кг,
$m_3 = 32$кг, $m_4 = 24$кг,
$R_1 = 34$см, $r_1 = 23$см,
$R_3 = 24$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.1\frac{1}{c}$.
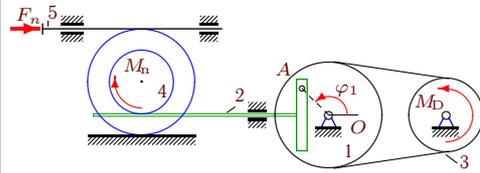
**Вариант 25**



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 9$Нм, $k = 11$Нмс,
$\nu = 25$Нс/м, $\mu = 14$Нмс,
$I_1 = 7$кгм$^2$, $m_2 = 15$кг,
$m_3 = 33$кг, $m_4 = 25$кг,
$R_1 = 34$см, $r_1 = 23$см,
$R_3 = 24$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 14$см,
$\varphi_{1,0} = 1.2$, $\omega_{1_z,0} = 0.1\frac{1}{c}$.
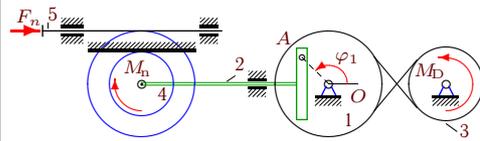
**Вариант 26**



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 12$Нм, $k = 11$Нмс,
$\nu = 8$кНс/м, $\mu = 12$Нмс,
$I_1 = 15$кгм$^2$, $m_2 = 17$кг,
$m_3 = 35$кг, $m_4 = 27$кг,
$R_1 = 34$см, $r_1 = 23$см,
$R_3 = 24$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 16$см,
$\varphi_{1,0} = 1.4$, $\omega_{1_z,0} = 0.1\frac{1}{c}$.
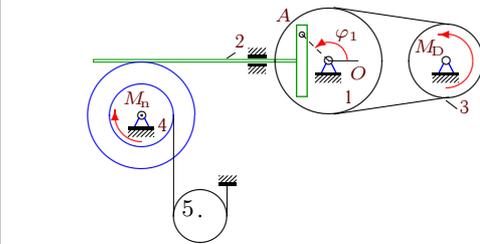
**Вариант 27**



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 8$Нм, $k = 12$Нмс,
$\mu = 15$Нмс, $I_1 = 5$кгм$^2$,
$m_2 = 14$кг, $m_3 = 32$кг,
$m_4 = 24$кг, $m_5 = 3$кг,
$R_1 = 35$см, $r_1 = 24$см,
$R_3 = 25$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 13$см,
$r_5 = 11$см,
$\varphi_{1,0} = 1.1$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
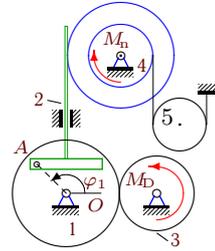
## Вариант 28



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$M_0 = 11$Нм,$k = 12$Нмс,
$\mu = 11$Нмс, $I_1 = 8$кгм$^2$,
$m_2 = 18$кг, $m_3 = 36$кг,
$m_4 = 28$кг, $m_5 = 6$кг,
$R_1 = 35$см, $r_1 = 24$см,
$R_3 = 25$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 17$см,
$r_5 = 10$см,
$\varphi_{1,0} = 1.5$, $\omega_{1_z,0} = 0.2\frac{1}{c}$.
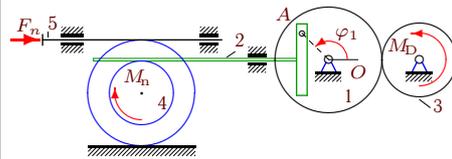
## Вариант 29



$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 10$Нм, $k = 11$Нмс,
$\nu = 15$Нс/м, $\mu = 12$Нмс,
$I_1 = 7$кгм$^2$, $m_2 = 17$кг,
$m_3 = 35$кг, $m_4 = 27$кг,
$R_1 = 34$см, $r_1 = 23$см,
$R_3 = 24$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 16$см,
$\varphi_{1,0} = 1.4$, $\omega_{1_z,0} = 0.1\frac{1}{c}$.

## Вариант 30
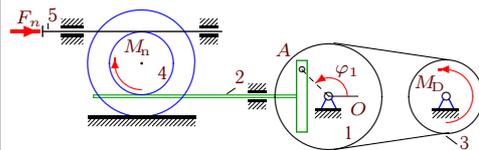


$M_{D_z} = M_0 - k\omega_{3_z}$,
$M_{n_z} = -\mu\omega_{4_z}$,
$F_{n_x} = -\nu v_{5_x}$,
$M_0 = 12$Нм, $k = 13$Нмс,
$\nu = 20$Нс/м, $\mu = 10$Нмс,
$I_1 = 13$кгм$^2$, $m_2 = 18$кг,
$m_3 = 36$кг, $m_4 = 28$кг,
$R_1 = 36$см, $r_1 = 25$см,
$R_3 = 26$см, $R_4 = 20$см,
$r_4 = 12$см, $i_4 = 17$см,
$\varphi_{1,0} = 1.5$, $\omega_{1_z,0} = 0.3\frac{1}{c}$.

Ответы

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

|   | $A$ | $B$ | $Q$ | $\varepsilon$ |
|---|-----|-----|-----|-----|
| 1 | 10.907 | 2.777 | -21.761 | -1.634 |
| 2 | 13.396 | 1.898 | 2.168 | 0.139 |
| 3 | 8.960 | 2.427 | -16.814 | -1.548 |
| 4 | 21.396 | 4.143 | -34.089 | -1.345 |
| 5 | 7.190 | 1.848 | -13.228 | -1.542 |
| 6 | 8.074 | 14.211 | -62.046 | -3.231 |
| 7 | 9.023 | 15.539 | -27.259 | -1.132 |
| 8 | 17.268 | 2.275 | -23.634 | -1.215 |
| 9 | 13.965 | 5.640 | -58.118 | -3.027 |
| 10 | 20.464 | 5.508 | -30.620 | -1.491 |
| 11 | 8.850 | 3.500 | 3.620 | 0.310 |
| 12 | 8.960 | 2.427 | 25.151 | 2.306 |
| 13 | 10.205 | 2.206 | -23.018 | -2.252 |
| 14 | 8.327 | 2.073 | -34.122 | -4.016 |
| 15 | 11.203 | 3.799 | -3.059 | -0.259 |
| 16 | 21.268 | 3.594 | -8.987 | -0.365 |
| 17 | 13.965 | 3.730 | -3.767 | -0.217 |
| 18 | 7.259 | 16.752 | -82.347 | -3.817 |
| 19 | 9.310 | 16.576 | -79.357 | -3.605 |
| 20 | 8.083 | 1.881 | -29.040 | -2.956 |
| 21 | 14.083 | 3.462 | -28.244 | -1.968 |
| 22 | 10.599 | 2.847 | -67.277 | -5.013 |
| 23 | 13.383 | 18.066 | -78.549 | -2.754 |
| 24 | 7.850 | 1.129 | -38.656 | -4.783 |
| 25 | 8.907 | 13.109 | -2.382 | -0.120 |
| 26 | 17.023 | 4.867 | -41.754 | -1.920 |
| 27 | 6.960 | 1.430 | 1.334 | 0.162 |
| 28 | 10.205 | 2.249 | -22.818 | -2.233 |
| 29 | 9.023 | 1.814 | -17.097 | -1.586 |
| 30 | 15.333 | 19.965 | -25.982 | -0.742 |