

N1.

$$\frac{1}{R_{01}} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$\frac{1}{R_{01}} = \frac{1}{4} + \frac{1}{4}$$

$$\frac{1}{R_{01}} = \frac{2}{4}$$

$$\frac{4}{R_{01}} = 2. R_{01} = 2 \text{ Ом.}$$

$$R_0 = R_{01} + R_3 + R_4$$

$$R_0 = 2 + 1 + 5 = 8 \text{ Ом.}$$

$$\underline{MIO = 8 \text{ Ом.}}$$

N2.

$$L_1 = L_2, L_2 = m v R, L_2 = (I_1 + I_2) \omega$$

$$m v R = (I_1 + I_2) \omega, \omega = \frac{m v R}{I_1 + I_2}$$

$$I_1 = m R^2$$

$$\omega = \frac{m v R}{m R^2 + I_2} = 1,02 \text{ рад/с}$$

$$\underline{MIO = 1,02 \text{ рад/с.}}$$

N3.

$$\frac{t_{\text{пер}}}{t_N} = 1,8$$

$$h_{\text{пер}} = h_N$$

$$g_{\text{пер}} = 9,8 \text{ м/с}^2$$

$$g_N = ?$$

$$h_g = \frac{\rho_N L^2 N}{2}$$

$$h_{\text{пер}} = \frac{\rho_{\text{пер}} L^2_{\text{пер}}}{2}$$

$$\frac{\rho_N L^2}{2} = \frac{\rho_{\text{пер}} L^2_{\text{пер}}}{2}$$

$$\rho_N = \frac{\rho_{\text{пер}} t^2_{\text{пер}}}{t_N^2} = \rho_{\text{пер}} \cdot \left( \frac{t_{\text{пер}}}{t_N} \right)^2$$

$$\rho_N = 9,8 \cdot 1,8^2 = 31,8 \text{ м/с}^2$$

$$\underline{MIO: 31,8 \text{ м/с}^2}$$