

1. $T_1 = \sqrt{\frac{27}{2}} T = 3,7 \text{ лет.}$
2. $T = \frac{\rho V g}{5} = 2,0 \text{ Н.}$
3. $\frac{l_1}{l_2} = \frac{(\xi_1 + \xi_2)(r_1 r_2 + R(r_1 + r_2))}{(r_1 + r_2 R)(\xi_1 r_2 + \xi_2 r_1)} = 1,0.$
4. $\frac{t_2}{t_1} = \frac{2t_k + t_y}{t_k + 2t_y} = 2,0.$
5. $u = \frac{v}{2} \sqrt{\sin^2 \alpha + \frac{\cos^2 \alpha}{4}} \approx 4 \text{ м/с.}$