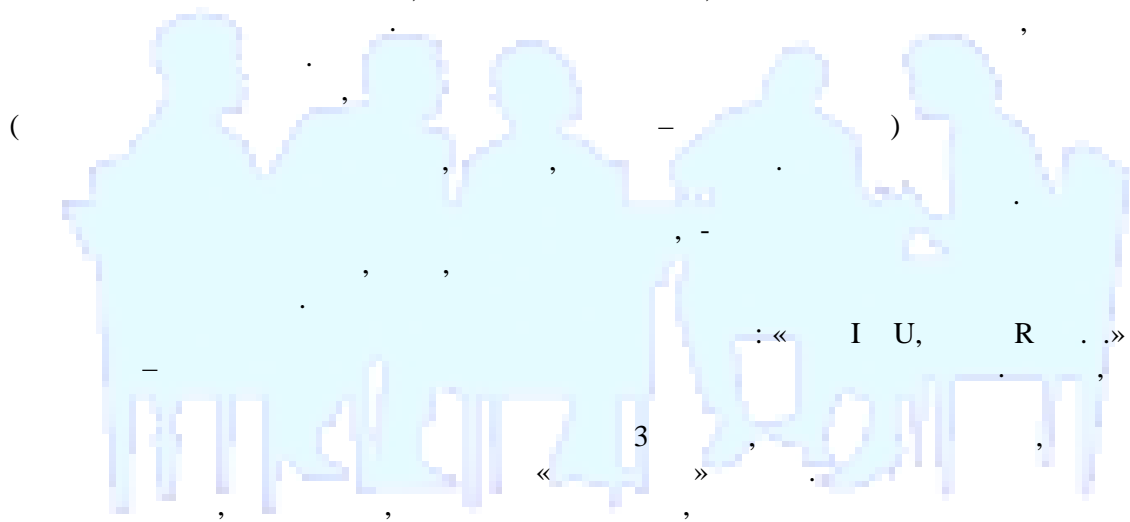


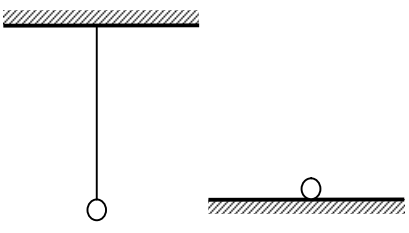
23.



« I U, R ... »

« 3 »

1.

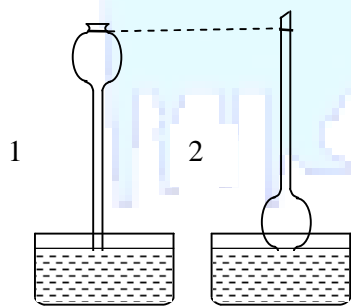


$Q_1 > Q_2$, $Q_1 < Q_2$.
 !

$-Q_1$, $-Q_2$,
 1. $Q_1 = Q_2$,

$$Q_1 = Q_2 \dots$$

$$: Q_1 < Q_2.$$



F

$$F = P \cdot S$$

$$, F = \text{const} ,$$

$$: A_1 = A_2.$$

1-

$$: T_1 < T_2.$$

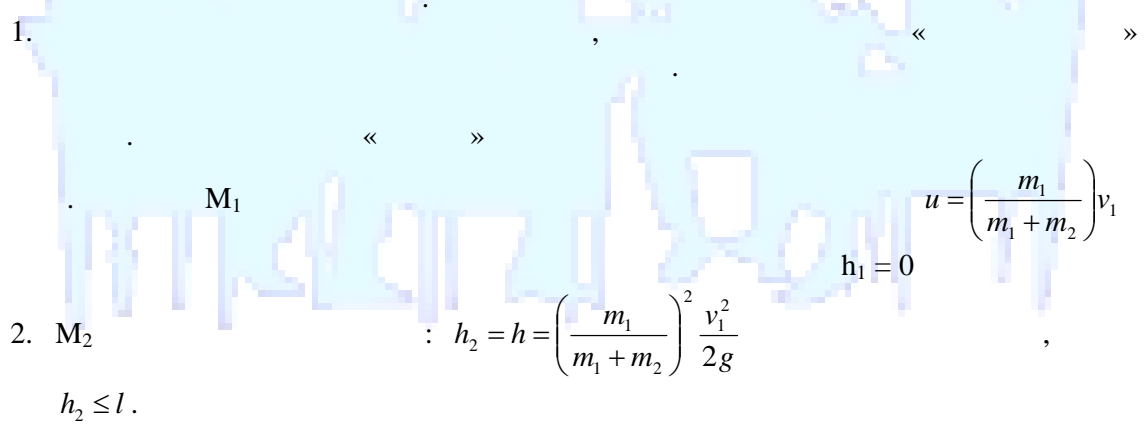
3.



$$\begin{cases} m_1 v_1 = (m_1 + m_2) u \\ \frac{(m_1 + m_2) u^2}{2} = (m_1 + m_2) g h \end{cases}$$

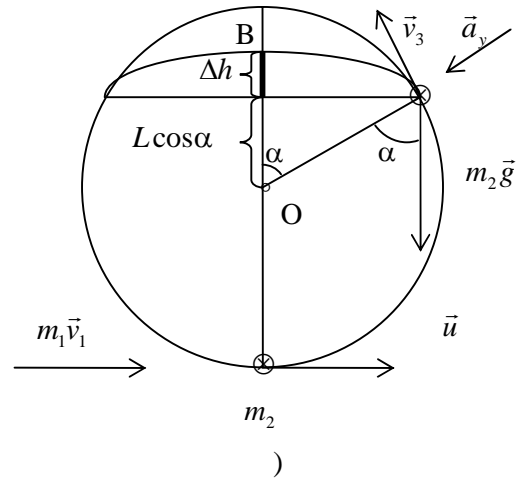
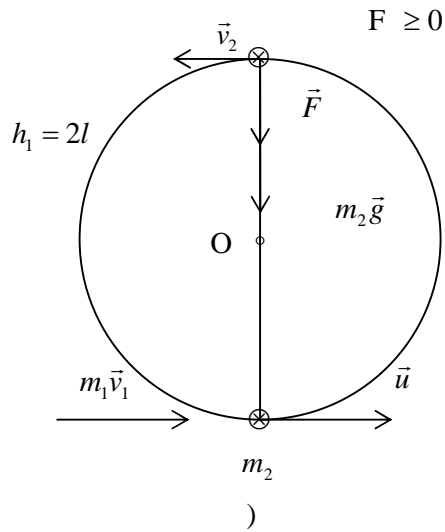
$$u = \frac{m_1}{m_1 + m_2} v_1; \quad h = \left(\frac{m_1}{m_1 + m_2} \right)^2 \frac{v_1^2}{2g}$$

$$: h_1 = h_2 = h$$



$$: v_1 \leq \sqrt{2gl} \left(1 + \frac{m_2}{m_1} \right)$$

$$M_2 \quad : h_2 = 2l \quad (\quad . 4 \quad)$$



.4

$$\frac{m_2 u^2}{2} = \frac{m_2 v_2^2}{2} + 2m_2 gl$$

$$m_2 g + F = \frac{m_2 v_2^2}{l}; F \geq 0$$

$$v_1 \geq \sqrt{5gl} \left(1 + \frac{m_2}{m_1} \right), h_2 = 2l$$

$$\sqrt{2gl} \left(1 + \frac{m_2}{m_1} \right) \leq v_1 \leq \sqrt{5gl} \left(1 + \frac{m_2}{m_1} \right)$$

F = 0,

$$m_2 g \cos \alpha = \frac{m_2 v_3^2}{l}; H = l + l \cos \alpha + \Delta h$$

$$\frac{m_2 u^2}{2} = m_2 gl(1 + \cos \alpha) + \frac{m v_3^2}{2}; \Delta h = \frac{v_3^2 \sin^2 \alpha}{2g}$$

$$H = l \left(1 + \frac{3}{2} \cos \alpha - \frac{\cos^3 \alpha}{2} \right)$$

$$\cos \alpha = \left(\frac{m_1}{m_1 + m_2} \right)^2 \frac{v_1^2}{3gl} - \frac{2}{3}$$

1. ... , ... , « ... » , , - « ... » , . 1985 .
2. ... , « ... » , . « ... »
3. ... , ... , « ... » , - « ... » , . 1976
4. ... , « ... » , . « ... » , 1990 .

