

9

1. (5 )

v,

u,

v<sub>1</sub>.

B,

$$t_1 = H / \sqrt{v^2 - u^2} = 136 \text{ (c)}.$$

$$t_2 = H/v = 90 \text{ c,}$$

C,

B

$$L = u \times t_2 = 75 \text{ .}$$

$$t_2 = L/v_1 = 42,2 \text{ c.}$$

, 132,2 .

B .

2. (10 )

$$V_2 = \frac{m_2}{\dots_2} = 0,01 \text{ }^3.$$

$$V_3 = \frac{m_3}{\dots_3} = 0,0003 \text{ }^3.$$

$$\dots_{23} = \frac{m_2 + m_3}{V_2 + V_3} = \frac{9,9}{0,0103} \approx 960 \text{ / }^3.$$

V<sub>3</sub>.
$$\frac{m_3}{\dots_1}$$

$$\Delta V = \frac{m_3}{\dots_3} - \frac{m_3}{\dots_1} = 0,0003 - 0,0009 = -0,0006 \text{ }^3.$$

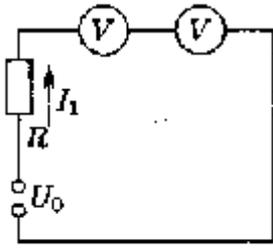
$$h = \frac{\Delta V}{f d^2 / 4} = \frac{4 \left( \frac{m_3}{m_3} - \frac{m_3}{m_1} \right)}{f d^2} \approx -0,02$$

3. (8)

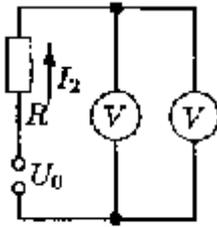
r.

R

$$I_1 = \frac{U_0}{R + 2r}, \quad I_2 = \frac{U_0}{R + \frac{r}{2}}$$



a)



б)

$$I_2/2.$$

$$V = \frac{U_0}{R + 2r} \cdot r, \quad V = \frac{1}{2} \frac{U_0}{\left( R + \frac{r}{2} \right)} \cdot r,$$

откуда  $R + 2r = 2R + r$ , т.е.  $r = R$  и  $U_0 = 3V = 30 \text{ В}$ .

4. (7)

$$Q_1 = \lambda m_1, \quad -\lambda -$$

$$m_1 - m_2, \quad Q_2 = Lm_2, \quad L - \lambda m_1 = Lm_2.$$

$$m_1 + m_2 = m,$$

$$\} m_1 = L(m - m_1) \Rightarrow \frac{m_1}{m} = \frac{L}{L + 1}$$

5. (10)

l

$$v = \frac{l}{t},$$

$$t = \sqrt{\frac{2h}{g}}$$