

(8)

1 (10) . , (1) . .
 , (2) , . (2))
 , (2))
 . (1)

2 (10) . , ... ()
 , - 5 , - 1 4
 ;
 - 5 , , - 2
).

3 (10) . :

- $P_{\dagger_1} = mc(100^\circ C - t_0), (2)$

- $mc\Delta t = \Delta mc((100^\circ C - \Delta t) - t_0), (2)$

- $P_{\dagger_2} = (m + \Delta m)c\Delta t, (2)$

$P -$. :

$$t_0 = 100^\circ C - \Delta t \left(\frac{\dagger_1}{\dagger_2} + 1 \right). (3)$$

:

$$t_0 = 100^\circ C - 12^\circ C \left(\frac{\frac{1}{2}}{\frac{1}{12}} + 1 \right) = 16^\circ C. (1)$$

4 (10) . :

$$S = \frac{S}{3} + \frac{v_1 t}{4} + \frac{S}{4} + \frac{v_2 t}{3} + v_3 \left(t - \frac{\frac{S}{3} + \frac{v_1 t}{4}}{v_1} - \frac{\frac{S}{4} + \frac{v_2 t}{3}}{v_2} \right). (3)$$

, :

$$v = \frac{S}{t}, (2)$$

:

$$v = \frac{v}{3} + \frac{v_1}{4} + \frac{v}{4} + \frac{v_2}{3} + v_3 \left(1 - \frac{\frac{v}{3} + \frac{v_1}{4}}{v_1} - \frac{\frac{v}{4} + \frac{v_2}{3}}{v_2} \right) \Rightarrow v_3 = \frac{v_1 v_2 (5v - 3v_1 - 4v_2)}{5v_1 v_2 - v (3v_1 + 4v_2)}. \quad (3)$$

:

$$v_3 = \frac{1 \cdot 3 \cdot (5 \cdot 2 - 3 \cdot 1 - 4 \cdot 3)}{5 \cdot 1 \cdot 3 - 2 \cdot (3 \cdot 1 + 4 \cdot 3)} = 1 \left(\frac{1}{1} \right). \quad (2)$$