10

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– 3 20 .

1

, α , -

. m₁ m₂,

μ₁ μ₂, - ? -

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, . , ,

. , **a₁ a₂**. ,

a₂ **a₁.** ,

. , , . .

, a₂ > a₁.

, **F –**

, **F₁ = > F₂ –** ,

N – , **N₁ = > N₂ –** . -

-

,

$$m_2 \, g \sin\alpha - F - F_2 = m_2 a_2,$$
$$m_1 \, g \sin\alpha + F_2 = m_1 a_1, \qquad , \qquad F_1 = F_2.$$

,

$$a_2 < g \sin\alpha, \ a_1 > g \sin\alpha,$$

. . $a_2 < a_1.$:

, $a_2 > a_1,$, $a_2 < a_1.$,

.

m₁ L m₂,

(.   ).

?

L , m_2 m₁

,   L   ,   -

m₁g L,   m₂ g L /2 (-
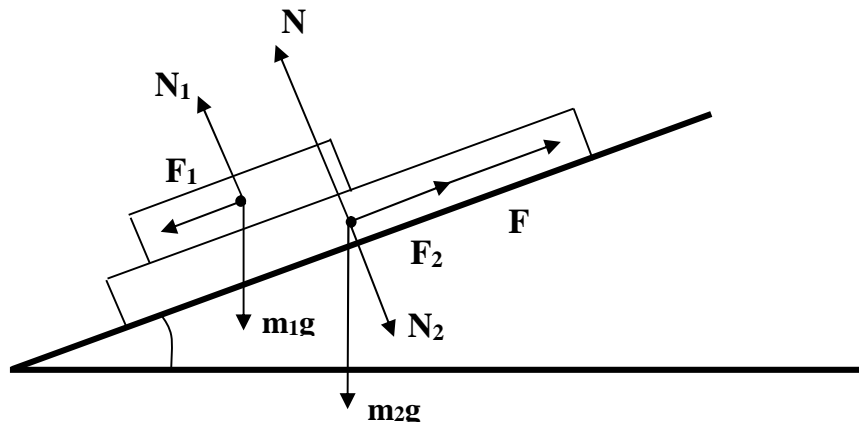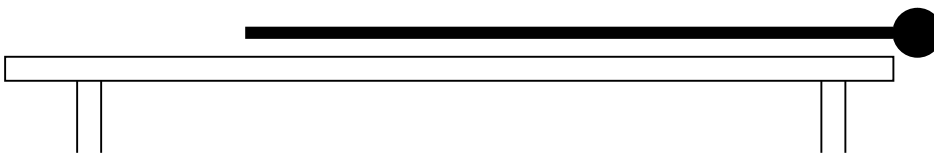
L/2).

:

$$g\,L\,(m_1 + m_2/2) = (m_1 + m_2)v^2/2$$

$$v^2 = 2\,g\,L(m_1 + m_2/2)/(m_1 + m_2)$$

$$V = \sqrt{\dfrac{2gL\left(m_1 + \dfrac{m_2}{2}\right)}{m_1 + m_2}}$$

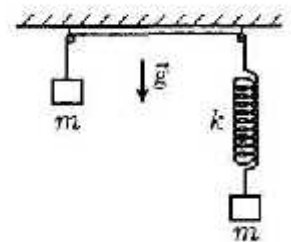,   ,   ,

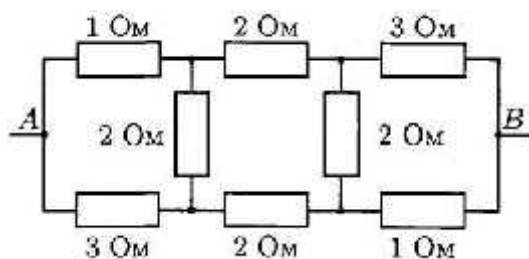k.   ,   .

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a,

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,   ,

,   .

,   2k,
/2   .

.   -

,   ,

,   .   -

$$\%o = \sqrt{\frac{2k}{m}}$$

$- a/2,$

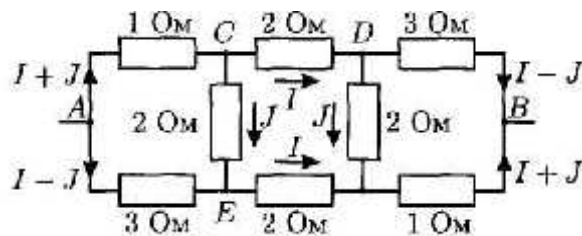$$V_{\max} = a\sqrt{\frac{k}{2m}}\,.$$

$- 100.$,   .

80   .   .   .

30   ,   ,   .

4

,

.

,   .

2   ,   '   (I).

,   2

(J).   ,

.

A B U_0.

ACE

$$(I + J) \cdot 1 \qquad + 2 \qquad \cdot J = 3 \qquad \cdot (I - J)$$

ACDB

$$(I + J) \cdot 1 \qquad + 2 \qquad \cdot I + 3 \qquad \cdot (I - J) = U_0$$

$$J = \frac{I}{3}, \quad I = \frac{3U_0}{16}$$

$$R = \frac{U_0}{2I} = \frac{8}{3}$$

$-80.$,   -   .

60   .   .   -   .

   20   ,   ,   .

    5

-
,
-

h

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,

(.   ). h_1 -
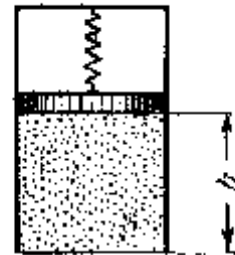
,

   $T_1?$,   .

    ,

,

$$F = kh.$$

$$P = kh/S, \qquad V = hS.$$

$$P_1 = kh_1/S, \qquad V_1 = h_1S.$$

$$\frac{pV}{T} = \frac{p_1V_1}{T_1}$$

$$\frac{khhS}{ST} = \frac{kh_1h_1S}{ST_1},$$

$$h_1 = h\sqrt{\frac{T_1}{T}}\ .$$

– 60.   ,   .

20   .