

სადირექციო წერა
ფიზიკა
VIII კლასი

1. მოც.:

$$S = 10\text{მ}$$

$$m = 400\text{გ} = 0,4\text{კგ}$$

$$F = 2\text{ნ}$$

$$\mu = 0,2$$

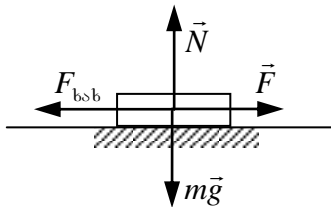
საპ. A_{mg} ; A_N ; $A_{F_{\text{ბბ}}}$; A_F

$$A_{mg} = 0 \text{ ჯ.}$$

$$A_N = 0 \text{ ჯ.}$$

$$A_F = F \cdot S = 20\text{ჯ} \text{ ჯ.}$$

$$A_{F_{\text{ბბ}}} = F_{\text{ბბ}} \cdot S = -\mu mg \cdot S = -8\text{ჯ} \text{ ჯ.}$$

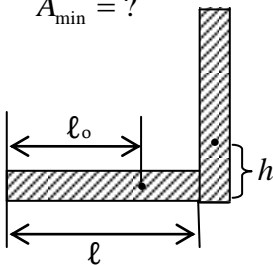


2. $m = 50\text{კგ}$

$$\ell = 10\text{მ}$$

$$\ell_o = 10\text{მ}$$

$$A_{\min} = ?$$



(1 ქულა)

$$A_{\min} = mgh \text{ (1 ქულა)}$$

$$h = \ell - \ell_o \text{ (1 ქულა)}$$

$$A_{\min} = mg(\ell - \ell_o) \text{ (1 ქულა)}$$

$$A_{\min} = 50 \cdot 10 \cdot 2 = 10^3\text{ჯ} \text{ (1 ქულა)}$$

3. მოც.:

$$v = 720\text{კმ/სთ}$$

$$N = 20\text{მგვტ} = 2 \cdot 10^7\text{ვტ}$$

$$n = 20 \text{ (1 ქულა)}$$

$$F_o = ?$$

$$F = \frac{N}{v} \text{ 2 ქულა}$$

$$F_o = \frac{N}{v \cdot n} = 50 \text{ კნ } 2 \text{ ქულა}$$

4. $h = 10 \text{ მ}$
 $v = 10 \text{ მ/წმ}$
 $E = 300 \text{ ჯ}$

$$m = ?$$

$$E_K + E_P = E \text{ 1 ქულა}$$

$$\frac{mv^2}{2} + mgh = E \text{ 2 ქულა}$$

$$m = \frac{E}{\frac{v^2}{2} + gh} = 2 \text{ კგ } 2 \text{ ქულა}$$

5. მოც.: I O-v
 II v-2v

$$\frac{A_2}{A_1} = ?$$

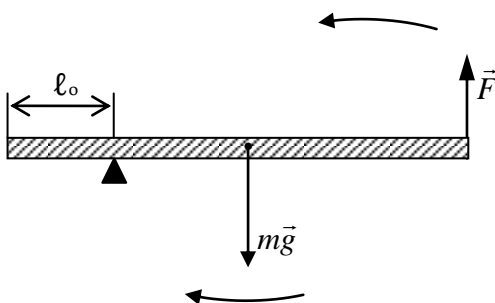
I $A_1 = \frac{mv_1^2}{2} - 0 = \frac{mv^2}{2} \text{ 2 ქულა}$

II $A_1 = \frac{m(2v)^2}{2} - \frac{mv^2}{2} = \frac{3mv^2}{2} \text{ 2 ქულა}$

$$\frac{A_2}{A_1} = 3 \text{ 1 ქულა}$$

6. მოც.: $\ell = 1,3 \text{ მ}$
 $m = 40 \text{ კგ}$
 $\ell_o = 30 \text{ სმ} = 0,3 \text{ მ}$

$$F = ?$$



1 ქულა

$$M_{mg} = M_F \text{ 1 ქულა}$$

$$M_{mg} = mg \left(\frac{\ell}{2} - \ell_o \right) \text{ 1 ქულა}$$

$$M_F = F(\ell - \ell_o) \text{ 1 ქულა}$$

$$mg\left(\frac{\ell}{2} - \ell_o\right) = F(\ell - \ell_o)$$

$$F = \frac{mg\left(\frac{\ell}{2} - \ell_o\right)}{\ell - \ell_o} = 1405 \text{ 1 ქულა}$$

7. $d = 1\text{მ}$

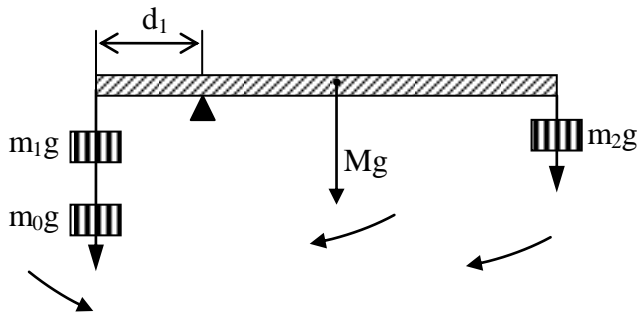
$$d_1 = 20\text{სმ} = 0,2\text{მ}$$

$$m_2 = 10\text{კგ}$$

$$M = 50\text{კგ}$$

$$m_0 = ?$$

(2) ეტაპი



(2) ეტაპისათვის:

$$m_1gd_1 + m_0gd_1 = Mg\left(\frac{d}{2} - d_1\right) + m_2g(d - d_1) \text{ 1 ქულა}$$

რადგან (1) ეტაპისათვის ბერკეტი გაწონასწორებულია:

$$m_1gd_1 = Mg\left(\frac{d}{2} - d_1\right) \text{ 1 ქულა,}$$

მაშინ შეგვიძლია დავწეროთ:

$$m_0gd_1 = m_2g(d - d_1) \text{ 1 ქულა}$$

$$m_0 = m_2 \frac{d - d_1}{d_1} = 40\text{კგ 1 ქულა}$$

8. მოც.: (1) x

(2) 2x

$$\frac{E_2}{E_1} = ?$$

$$E_1 = \frac{kx^2}{2} \text{ 2 ქულა}$$

$$E_2 = \frac{k(3x)^2}{2} \text{ 2 ქულა}$$

$$\frac{E_2}{E_1} = 9 \text{ 1 ქულა}$$