სადირექციო წერა
ფიზიკა
VII კლასი

1. მოც.: $v_1 = 15$ მ/წმ

$t_1 = 20$ წმ

$t_2 = 1$ წთ=60 წმ

$s_1 = s_2$

_____

$v_2 = ?$ (1 ქულა)

$s_1 = v_1 t_1$ (1 ქულა)

$s_2 = v_2 t_2$ (1 ქულა)

$v_1 t_1 = v_2 t_2$ (1 ქულა)

$v_2 = \frac{v_1 t_1}{t_2} = 5$მ/წმ (1 ქულა)

2. მოც.: $s_1 = 200$ მ

$t_1 = 10$ წმ

$s_2 = 510$მ

$v_2 = v_1 - 3$ მ/წმ

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$t_2 = ?$ (1 ქულა)

$v_1 = \frac{s_1}{t_1} = 20$ მ/წმ (1 ქულა)

$v_2 = 20 - 3 = 17$ მ/წმ (1 ქულა)

$t_2 = \frac{s_2}{t_2} = \frac{510}{17} = 30$ წმ (2 ქულა)

3. მოც.: $v_1 = 30$ მ/წმ

$t_1 = t_2$

$s_1 = s$

$s_2 = 5s$

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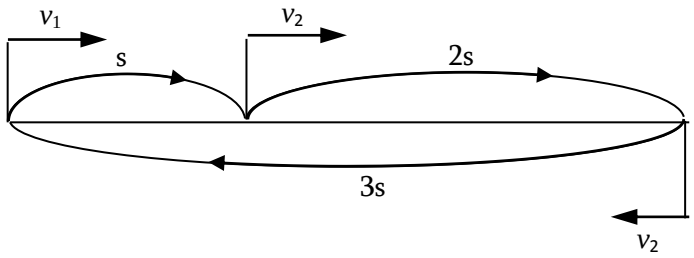
$v_2 = ?$ (1 ქულა)



(1 ქულა)

$$t_1 = \frac{s_1}{v_1} = \frac{s}{v_1}$$
$$t_2 = \frac{s_2}{v_2} = \frac{5s}{v_2}$$

(1 ქულა)

$t_1 = t_2$

$\frac{s}{v_1} = \frac{5s}{v_2}$ (1 ქულა)

$v_2 = 5v_1 = 150$ კმ/სთ (1 ქულა).

4. მოც.:

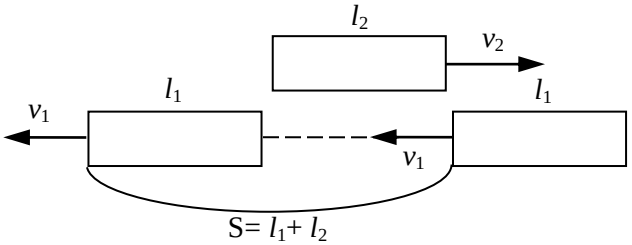
$v_1 = 15$ მ/წმ

$v_2 = 72$ კმ/სთ=20მ/წმ

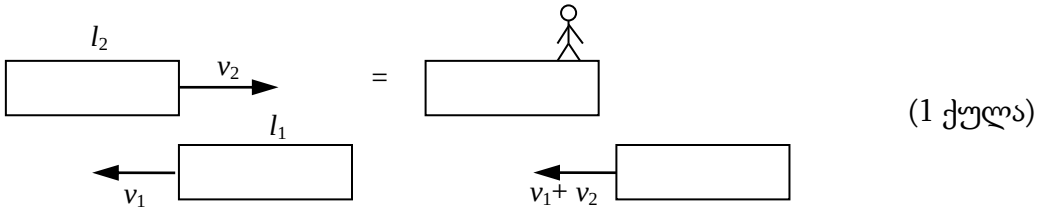
$l_1 = 100$მ

t=10 წმ

$l_2 = ?$ (1 ქულა)



(1 ქულა)



(1 ქულა)

$s = vt$

$s = l_1 + l_2$

$v = v_1 + v_2$ (1 ქულა)

$l_1 + l_2 = (v_1 + v_2) \cdot t$

$l_1 = 250$ მ

5. მოც.:

t=30 წთ=1800წმ

s=36 კმ=3600 მ

$v_ბ$=15მ/წმ

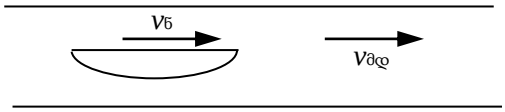
$v_{ად}$=?

(1 ქულა)

$v = v_ბ + v_{ად}$ (1 ქულა)

$v = \frac{s}{t}$ (1 ქულა)

$v_ბ + v_{ად} = \frac{s}{t}$ $15 + v_{ად} = \frac{3600}{1800}$ $v_{ად}$=5 მ/წმ (1 ქულა)



(1 ქულა)

6. მოც.:

S_1=600 მ

v_1=10 მ/წმ

$t_2 = 20$ წმ

$s_2 = 0$

$s_3 = 800$ მ

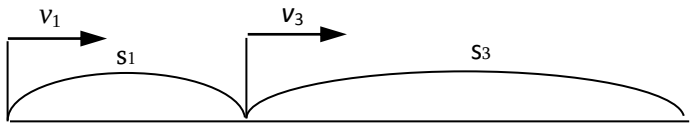
$v_3 = 20$ მ/წმ

$v_{საშ.}$ -?

(1 ქულა)

$v_{საშ.} = \frac{s_1 + s_2 + s_3}{t_1 + t_2 + t_3}$ (1 ქულა)

$$v_{\text{სა.}} = \frac{600+0+800}{\frac{s_1}{v_1}+t_2+\frac{s_3}{v_3}} = \frac{1400}{\frac{600}{10}+20+\frac{800}{20}} = \frac{1400}{120} = \frac{35}{3} \quad \text{მ/წმ} \quad (2 \text{ ქულა})$$



(1 ქულა)

7. ა) 0-10 წმ შუალედში

v_1=6 მ/წმ

t_1=4 წმ

v_2=2მ/წმ

t_2=6 წმ

$v_{\text{სა.}}$ -? (1 ქულა)

$$v_{\text{სა.}} = \frac{s_1+s_2}{t_1+t_2} \quad (1 \text{ ქულა})$$

$$v_{\text{სა.}} = \frac{v_1t_1+v_2t_2}{t_1+t_2}$$

$$v_{\text{სა.}} = \frac{6\cdot4+2\cdot6}{4+6} = 3{,}6 \quad \text{მ/წმ} \quad (1 \text{ ქულა})$$

ბ) ა) 0-18 წმ შუალედში

v_1=6 მ/წმ

t_1=4 წმ

v_2=2მ/წმ

t_2=6 წმ

v_3=9მ/წმ

t_3=8წმ

$v_{\text{სა.}}$ -? (1 ქულა)

$$v_{\text{სა.}} = \frac{s_1+s_2+s_3}{t_1+t_2+t_3}$$

$$v_{\text{სა.}} = \frac{v_1t_1+v_2t_2+v_3t_3}{t_1+t_2+t_3}$$

$$v_{\text{სა.}} = \frac{6\cdot4+2\cdot6+9\cdot8}{4+6+8} = 6 \quad \text{მ/წმ}$$

(1 ქულა)

8.

$$v_1 = \frac{s_1}{t_1} = \frac{18}{3} = 6 \text{ მ/წმ}$$

(1 ქულა)

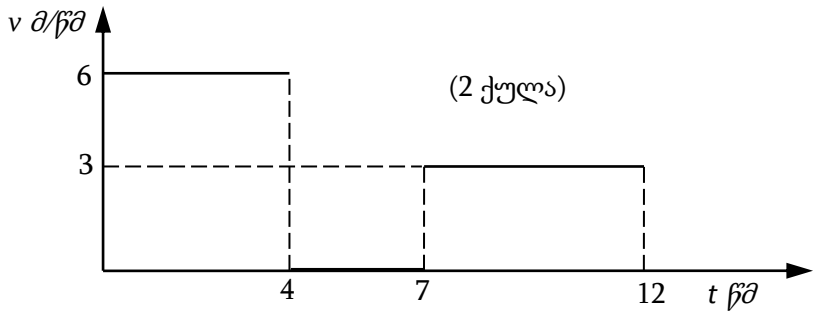
$$v_2 = \frac{s_2}{t_2} = 0$$

(1 ქულა)

$$v_3 = \frac{s_3}{t_3} = \frac{30-24}{9-7} = 3 \text{ მ/წმ}$$

(1 ქულა)

$$t_1 = \frac{24}{6} = 4 \text{ წმ}$$



(2 ქულა)