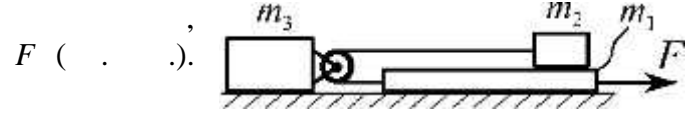


()

1.

$m_1 = m, m_2 = 2m, m_3 = 3m$.
1) m_1, m_2
2) m_2, m_3



2.

3

1)

2)

3.

1)

2)

4.

1)

2)

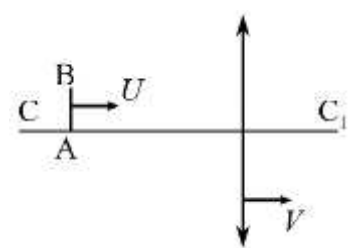
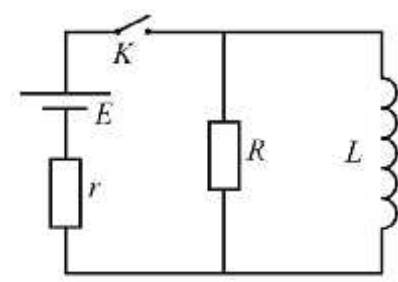
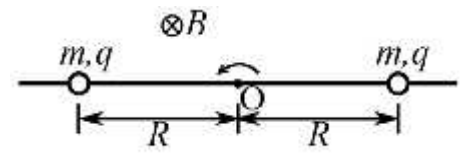
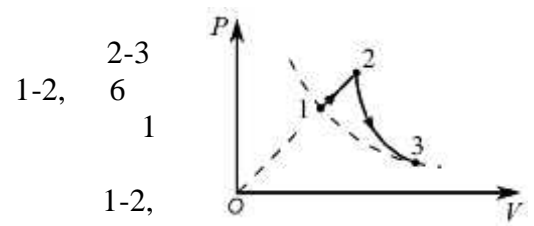
3)

5.

1)

2)

3)



$F = 20$

$h = 1$

$d = 3F/2$

$V = 1$

$U = 3V/2$

Q

$R = 5r$

1,5

I_L

?

?

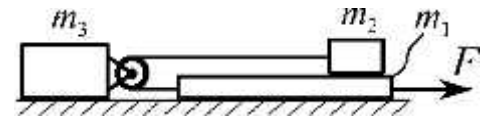
?

?

()

1.

..., F (.).
..., $m_1 = 2m$
..., $m_1 = m_2 \sim$
..., $m_2 = m, m_3 = 3m$.



1)

..., F, m, \sim

2)

..., F, m, \sim m_1
..., $m_1 = m_3$

2.

1-2, (.).

..., 2-3, 2

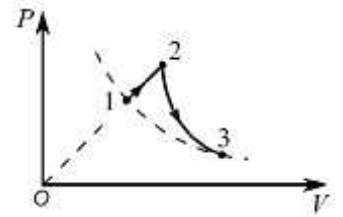
1 3

1)

2)

2-3.

2-3 1-2.



3.

..., q m ,

..., B

c

(.).

R

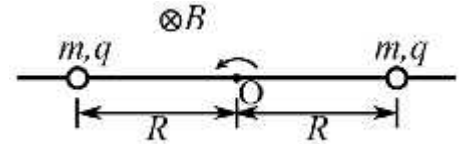
1)

2)

B ,

..., $m, R, q_1 = q_2$.

..., $m, R, q_1 = q_2$.



4.

..., $R = 4r$.

3

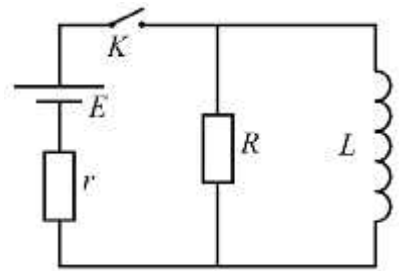
1)

2)

I_L

3)

Q



5.

..., $F = 24$

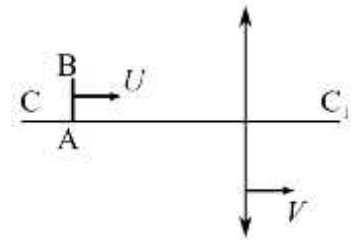
..., $h = 1$

..., 1,

..., $V = 1$

..., $U = 5V / 4$.

..., $d = 5F / 4$



1)

2)

3)

?

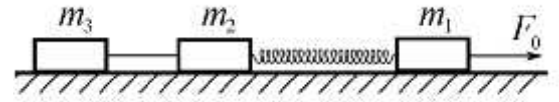
()

1.

$k = 22 \text{ / (.)}.$

$m = 0,2$

$m_1 = m, m_2 = 2m, m_3 = 3m.$



$F_0 = 2,1$, m_1 ,
30%

- 1)
- 2) T
- 3) L_0

2.

$C = 0,5R.$

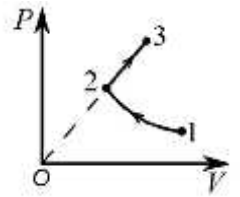
1-2

2-3,

$Q.$

(.).

2-3



- 1) A
- 2) Q_{12} ()

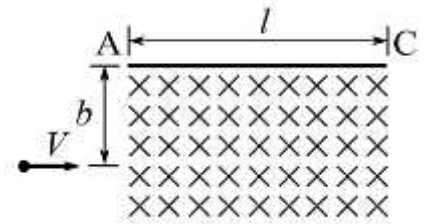
1-2?

3.

$l = 30\sqrt{3}$

c
 $V = 1$ /

$B = 1$



C.

$x = q/m = 10^{-2}$ / (.).

$b = 15$,

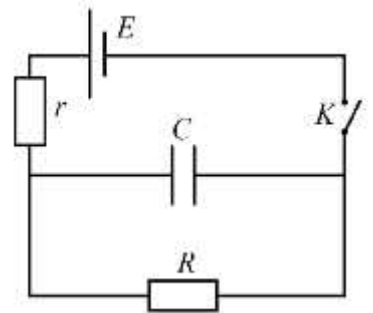
- 1)
- 2)
- 3)

$f = 3,14.$

4.

- 2
- 1) I_m R
- 2) U_C
- 3) $P,$

R

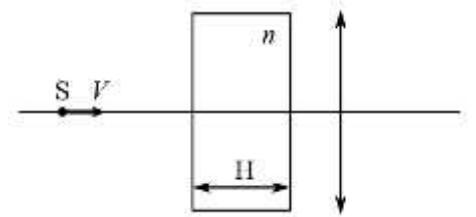


5.

S c $V = 1$ / $F = 10$ (.).

$H = 5$

$n = 5/3.$
 $d = 14$



- 1)
- 2)
- 3)

?

?

?

()

1.

$k = 7,5$ / (.).

$m = 0,3$

$m_1 = m, m_2 = 2m, m_3 = 3m$.

- 1)
- 2) T
- 3) L_0

2.

(.). $C = 0,75R$. 1-2, 1-2

- 1) Q_{12} ()
- 2) Q_{23} ()

3.

$l = 10\sqrt{3}$ $2b = 30$,

$x = q/m = 10^{-2}$ / (.).

- 1)
- 2)
- 3)

$f = 3,14$.

4.

- 1) I_m
- 2)
- 3) P ,

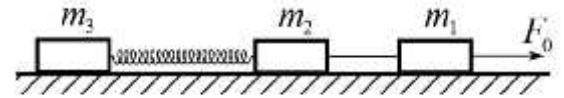
5.

S $V = 3$ / $F = 25$ (.).

$n = 5/3$.
 $d = 34$

$H = 10$

- 1)
- 2)
- 3)

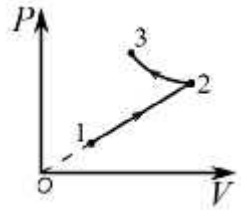


$F_0 = 2,1$, m_1 , 40%

2-3

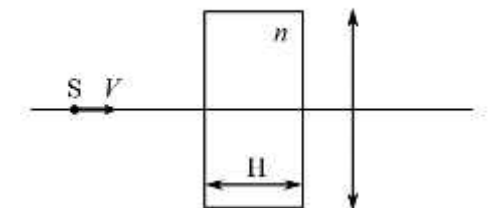
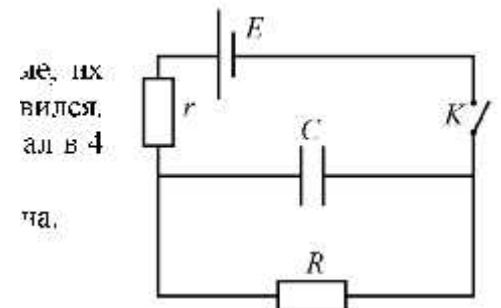
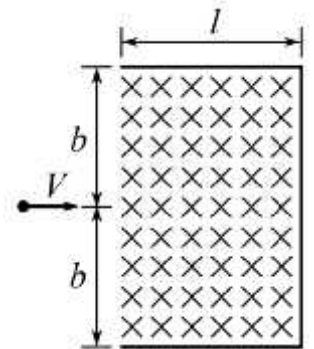
A.

- 1-2?
- 2-3?



$B = 1$,

$V = 1$ /



? ? ? ?

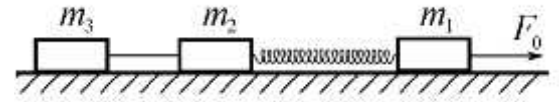
()

1.

$k = 12 \text{ / (.)}.$

$m = 0,2$

$m_1 = 2m, m_2 = 3m, m_3 = 4m.$



$F_0 = 0,84$

35%

$m_1,$

1)

2) T

3) L_0

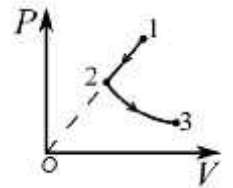
2.

1-2,

$(. .).$
 $C = R.$

2-3

$A (A > 0).$



1) Q_{12} ()

1-2?

2) Q_{23} ()

2-3?

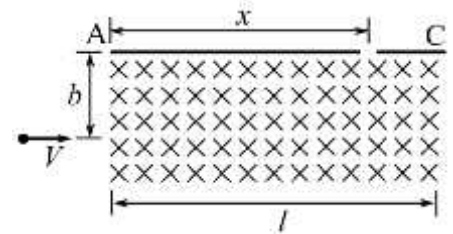
3.

c

$B = 1$

$V = 1 \text{ /}$

$x = q/m = 10^{-2} \text{ / (.)}.$



AC.

$b = 15$

$x = 25\sqrt{3}$

1)

2)

3)

$f = 3,14.$

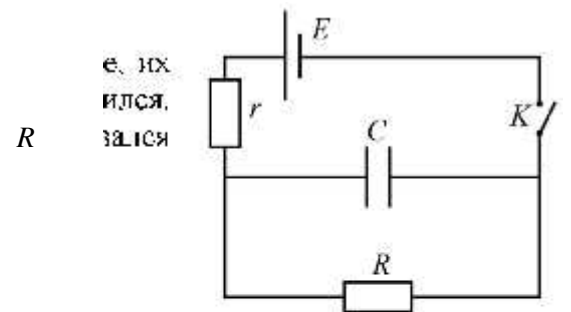
4.

3

1) I_m R

2) U_C

3) $P,$

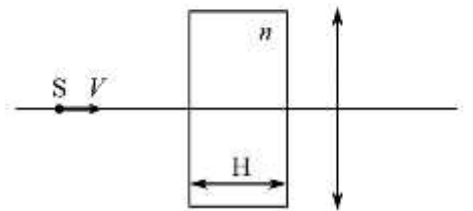


5.

S

$V = 4 \text{ /}$

$F = 15 \text{ (.)}.$



$H = 5$

$n = 5/3.$

$d = 22$

1)

2)

3)

?

?

?

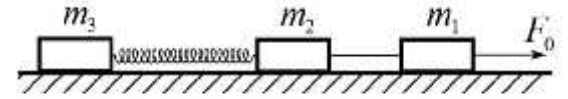
()

1.

$k = 10 / (\dots)$.

$m = 0,25$

$m_1 = 3m, m_2 = m, m_3 = 2m$.



$F_0 = 1,4$

25%

m_1

1)

2)

3)

T

L_0

2.

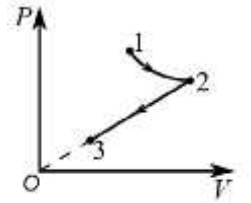
$C = R$.

(\dots)

2-3

1-2
2-3,

$Q (Q > 0)$.



1)

2)

A

Q_{12}

(\dots)

1-2?

3.

AC,

c

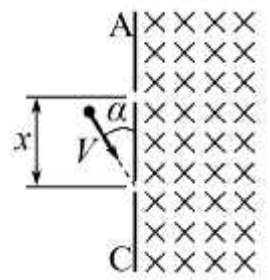
$B = 1$

$V = 1 /$

$x = q/m = 10^{-2} / (\dots)$.

30° ,

$x = 30$



1)

2)

3)

$f = 3,14$.

4.

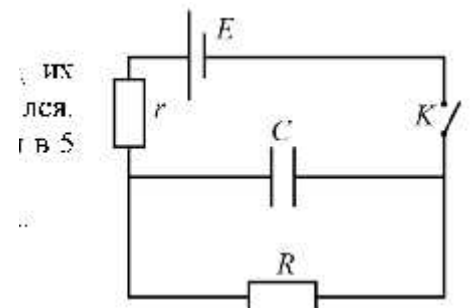
1)

2)

3)

I_m

P ,



5.

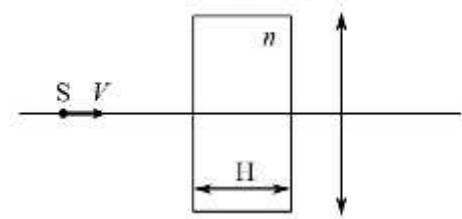
S

c

$V = 2 /$

$F = 20 (\dots)$.

$H = 10$



$n = 5/3$.

$d = 29$

1)

2)

3)

?

?

?