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A

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6

5

30

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

8

15

120

1.

$R$

$$S = bt + \frac{1}{2}ct^2$$

$b$   $c$

$t$   $0$

2.

$m$   $0.1$  kg

$k$   $20$  N/m

$0.25$

$x$   $0.4$  m  
 $v$

3.

$O$

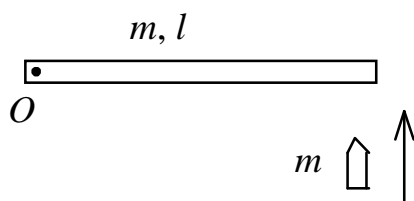
$m$   $1.5$  kg

$l$   $1.0$  m

(1)

(2)

$M_r$   $4.0$  N m



4.

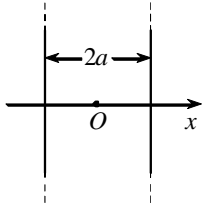
$2a$

$x$

(1)

$x$

(2)



5.

$R_1 R_2$

$r$

$I$

6.

$p_0 = 1.2 \cdot 10^6 \text{ Pa}$ ,

$V_0 = 8.31 \cdot 10^3 \text{ m}^3, T_0 = 300 \text{ K}$

$T_1 = 450 \text{ K}$

$p = p_0$

$C_p / C_V = 5/3$

(1)

$C_p$

$C_V$

(2)

(  $R = 8.31 \text{ J mol}^{-1} \text{ K}^{-1}$  )

7.

$ab$

$l$

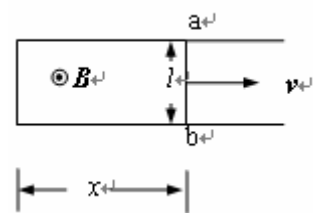
$\vec{B}$

$\vec{B}$

$B = B_0 \cos t$

$ab$

$x$



8.

$V$

$p_1$

$T_1$

$p_2$

$T_2$

$\bar{v}_1 / \bar{v}_2$