

【1】

(1) (ア)  $m_1g = N + kx$

(イ)  $\frac{m_1g}{k}$

(ウ)  $-\frac{m_1^2g^2}{2k}$

(エ)  $-\frac{m_1^2g^2}{2k}$

(2)  $\sqrt{2gh}$

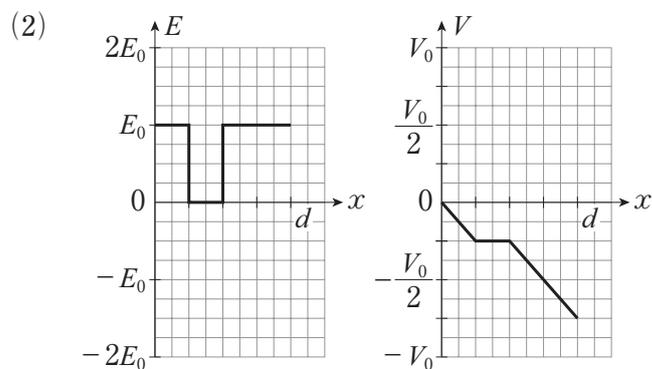
(3)  $v = \frac{(m_2 - eM)\sqrt{2gh}}{M + m_2}$

$V = \frac{(1 + e)m_2\sqrt{2gh}}{M + m_2}$

(4)  $\frac{Mg}{k} + \frac{2m_2}{M + m_2} \sqrt{\frac{2ghM}{k}}$

【2】

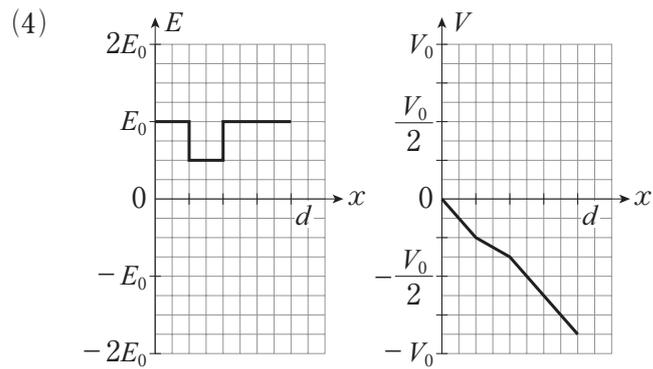
(1)  $\frac{4\epsilon_0S}{3d}$



(3) Aa間 :  $\frac{1}{4}$  倍

ab間 :  $\frac{1}{8}$  倍

bB間 :  $\frac{1}{2}$  倍



(5)  $\frac{8}{7}$  倍

(6)  $-\frac{Q^2}{16C_0}$

**[3]**

(1)  $\frac{3P_0V_0}{RT_0}$

(2)  $\frac{9}{2}P_0V_0$

(3) 0 (ゼロ)

(4)  $P_0$

(5)  $\frac{3}{2}P_0$

(6)  $\frac{9}{4}P_0V_0$

(7)  $\frac{3}{2}T_0$