

1

- 問 1 (1)  $\sqrt{2gh}$       (2)  $\frac{5}{2}a$       (3)  $e\sqrt{2gh}$       (4)  $\frac{5a}{2e^{2n}}$
- 問 2 (5)  $\sqrt{2gh}$       (6)  $\sqrt{gh}$       (あ) (イ)      (7)  $\frac{1}{2}\sqrt{\frac{3h}{g}}$       (8)  $\frac{7}{8}h$
- (9)  $\frac{\sqrt{3} + \sqrt{7}}{4}h$

2

- 問 1 (1)  $p_0 + \frac{Mg}{S}$       (2)  $\frac{RT_0}{p_1}$       (3)  $\frac{3RT_0}{2N_A}$       (4)  $p_1 \left(\frac{V_1}{V_A}\right)^{\frac{5}{3}}$
- (5)  $\frac{3}{2}RT_0 \left(\frac{V_1}{V_A}\right)^{\frac{2}{3}}$       (あ) (ウ)
- 問 2 (6)  $2p_1$       (イ) (イ)      (7)  $\frac{1}{4}p_2V_1$       (8)  $E + \frac{1}{4}p_2V_1$

3

- 問 1 (1)  $\frac{Q^2d}{2\varepsilon_0S}$       (2)  $\frac{2\varepsilon_0S}{d}$       (3)  $\frac{1}{2}$       (4)  $\frac{2\varepsilon_0\varepsilon S}{(\varepsilon_0 + \varepsilon)d}$
- (5)  $\frac{\varepsilon_0 + \varepsilon}{2\varepsilon}$       (あ) (エ)
- 問 2 (6)  $\frac{eV}{mL}$       (7)  $\frac{eVT}{mL}$       (8)  $enwS$       (9)  $\frac{e^2nST}{2mL}$       (10)  $\frac{e^2nSTV^2}{2mL}$