

1. (1) (ア) $\frac{\sqrt{gR}}{2}$ (イ) $\frac{g}{2}$ (ウ) $\frac{3mg}{8}$ (エ) $\frac{\sqrt{3gR}}{2}$
 (2) (オ) $\frac{1}{2}\sqrt{\frac{gR}{6}}$ (カ) $\sqrt{\frac{gR}{6}}$
 (3) (キ) $\frac{1}{4m}$ (ク) $2\sqrt{3}$ (ケ) $\frac{4}{3}(2 - \sqrt{3})g$
2. (1) (ア) $\frac{EBL}{R}$ (イ) $\frac{mgR}{2EL}$ (ウ) $\frac{E - vBL}{R}$ (エ) $E - \frac{mgR}{2BL}$
 (オ) $R\left(\frac{mg}{2BL}\right)^2$
 (2) (カ) $CuBL$ (キ) $\frac{(2m + CB^2L^2)u^2}{mg}$ (ク) CBL
3. (1) (ア) $\frac{RT}{V}$ (イ) $\frac{2}{3}$ (ウ) $\frac{1}{k^5}$
 (エ) $\frac{1}{3}\left(2p_0 + \frac{RT_1}{k^5V_1}\right)$ (オ) $\frac{3}{2}\left(\frac{1}{k^2} - 1\right)RT_1$ (カ) $2(1 - k^3)p_0V_1$
 (2) (キ) $\frac{2}{3(n+1)}$ (ク) $\frac{1}{k^4}$