

$$〔Ⅰ〕(ア) \frac{GmM}{r_0^2}$$

$$(イ) -\frac{GmM}{r_0}$$

$$(ウ) 2\sqrt{\frac{2r_0r_sGM}{(r_0+r_s)^3}}$$

$$(イ) GmM\left(\frac{1}{r_{i+1}} - \frac{1}{r_i}\right)$$

$$(ア) \sqrt{\frac{GM}{r_0}}$$

$$(ウ) \frac{\pi}{2}\sqrt{\frac{r_0^3}{2GM}}$$

$$(ウ) GmM\left(\frac{1}{r_n} - \frac{1}{r_0}\right)$$

$$(カ) 2\pi\sqrt{\frac{r_0^3}{GM}}$$

$$(キ) \pi\sqrt{\frac{(r_0+r_s)^3}{2GM}}$$

$$〔Ⅱ〕(ア) nvsSt$$

$$(ア) \frac{R_x}{r_1+r_2+R_x}$$

$$(ウ) \frac{r_V R_x}{r_V+r_3+r_4+R_x}$$

$$(イ) envS$$

$$(カ) \frac{r_V(r_1+r_2+R_x)}{r_V+r_1+r_2+R_x}$$

$$(ウ) \frac{eV}{kL}$$

$$(イ) \frac{kL}{e^2nS}$$

$$(キ) \frac{r_V+r_3+r_4}{r_V}$$

$$〔Ⅲ〕(ア) p_0 + 2\rho gh$$

$$(イ) p_0S + 4\rho Sgh$$

$$(キ) \left(\frac{p_0}{p_0+2\rho gh}\right)^{\frac{3}{5}} V_0$$

(a) (2)

$$(イ) 2Sh(p_0 + \rho gh)$$

$$(ア) \frac{p_0V_0}{p_0+2\rho gh}$$

$$(ウ) \frac{3}{2}\{p_0^{\frac{3}{5}}(p_0+2\rho gh)^{\frac{2}{5}} - p_0\} V_0$$

$$(ウ) \left(1 + \frac{2\rho gh}{p_0}\right) T_0$$

$$(カ) \frac{4\rho ghV_0}{p_0+2\rho gh} + 4Sh$$