

11

1.

«12»
 ()

2.

(-200°C)
 — 99 %
 : $p = \rho gh$, ρ —
 , h — : $h = \frac{p}{\rho g}$.
 $p = 10^5$, $\rho = 860$ / 3 $g = 9,8$ /
 h 12 .
 — , 12

3.

46 ,
 (, 12.00).

4.

22 .
 ☉ -
 $\delta_e = +23^0$. ()

22

$$h = 90^\circ - \varphi + \delta = 48^\circ, \quad -\varphi = 65^\circ.$$

$$\delta_c = -23^\circ 26'.$$

2°.

5.

$$R + h, \quad h = 400 \quad R, \quad D.$$

$$: (R + h)^2 = D^2 + R^2, \quad D^2 = 2Rh + h^2 = 2Rh \left(1 + \frac{h}{2R} \right).$$

$$h \ll R,$$

$$D \ll R,$$

$$h \ll R: D = \sqrt{2Rh}.$$

$$: s = \pi D^2,$$

$$: S = 4\pi R^2.$$

$$\frac{s}{S} = \frac{h}{2R} = 0,03 (\dots$$

3%).

6.

$$h \ll R,$$

$$ma_u = \frac{mv^2}{R} = mg. \quad (1)$$

20 %

$$F = \frac{\Delta m_1}{\Delta t} u.$$

(1)

$$mg = \frac{\Delta m_1}{\Delta t} u + \frac{m(0,8v)^2}{R}. \quad (2)$$

50 %

$$mg = \frac{\Delta m_2}{\Delta t} u + \frac{m(0,4v)^2}{R}. \quad (3)$$

(2) (3)

$$\frac{\Delta m_2}{\Delta t} \quad \frac{\Delta m_1}{\Delta t}.$$

$$\frac{\Delta m_2 / \Delta t}{\Delta m_1 / \Delta t} = \frac{g - \frac{(0,4v)^2}{R}}{g - \frac{(0,8v)^2}{R}}.$$

$$, \quad \frac{v^2}{R} = g,$$

$$\frac{\Delta m_2}{\Delta t} = \frac{\Delta m_1 (1 - 0,4^2)}{\Delta t (1 - 0,8^2)}.$$

$$\frac{\Delta m_2}{\Delta t} = 7 \quad / .$$