9

:

9.1
.

9.2
.   .

,   ,

.   .

2   ,   4
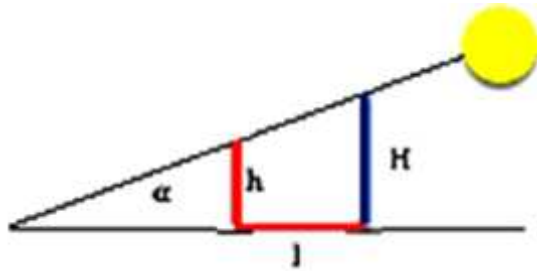
.   ,   -   8

4   .

9.3

:

=1,8 ; h=0,8 ; l=1,6 .   r

$$r = \tan^{-1}\left(\frac{H-h}{l}\right) = 32°.$$

d $d = \dfrac{H}{\tan r} = 2,9$.

9.4

	, 31
	,
	,
	,
	-

9.5

$$G\frac{m \cdot M}{R^2} = G\frac{m \cdot m}{r^2},$$

$m -$ $, M -$ $, R -$,
$r -$.
:

$$r = \frac{m \cdot R}{\sqrt{m \cdot M}} \approx 0,8 \quad .$$

9.6

$$\hat{} \approx \sqrt{G\frac{M}{R^2}R} = \sqrt{G\frac{M}{R}}, \qquad\qquad\qquad : \quad \hat{}_0 \approx \sqrt{G\frac{M_0}{R_0}}.$$

,

$$\hat{} \sqcup \sqrt{G\frac{R^3}{R}} \sqcup R, \quad \hat{}_0 \sqcup \sqrt{G\frac{R^3}{R}} \sqcup R_0, \quad \hat{}/\hat{}_0 \approx 2/1.$$

2   .