

2.12

$$\Delta t = 3^\circ \text{C}$$

$$h = 1,7 \text{ м}$$

$$\frac{\partial n}{\partial t} = -0,98 \cdot 10^{-6} \text{ град}^{-1}$$

$$\sin(\alpha_{\text{кр.}}) = \frac{n_2}{n_1}$$

Табличное значение

$$n_{\text{воздух}} = 1,0003 = n_1$$

$$n_2 = n_1 - 0,98 \cdot 3 \cdot 10^{-6} =$$

$$= n_1 - 0,00000294$$

$$n_2 = 1,00029706$$

← коэф. преломления воздуха
тем-ры и-го больше на 3°

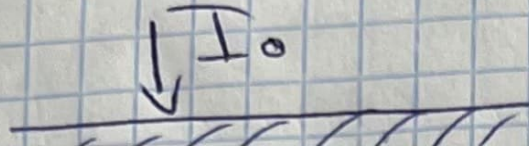
$$\sin(\alpha_{\text{кр.}}) = \frac{n_2}{n_1} = 0,999997061$$

$$\cos(\alpha_{\text{кр.}}) = \sqrt{1 - \sin^2(\alpha_{\text{кр.}})} = 0,002424$$

$$\text{tg}(\alpha_{\text{кр.}}) = \frac{\sin(\alpha_{\text{кр.}})}{\cos(\alpha_{\text{кр.}})} = 412,45$$

$$\ell = \lg(\alpha_{\text{up}}) \cdot h = 1.7 \cdot 412,45 \approx 701 \text{ m}$$

2.6



$$n_1 = 1. \text{ Baggyx}$$