

## LPR Cup

9.s02.epilogue



People only believe when they are interested.

Better to leave before you make them bored.

«The Little White Horse» Elizabeth Goudge

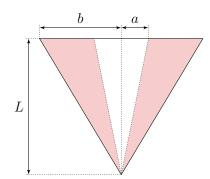
## Epilogue

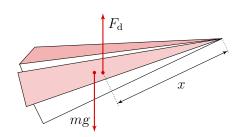
Each of us made paper airplanes and watched them fly. We often remember that wonderful time and now invite you to remember it with us.

## The task

Let's create an airplane from A4 paper. Its net is presented in the figure, the ratio of technical characteristics is as follows:

$$\frac{a}{L} = \frac{2}{15}; \quad \frac{b}{L} = \frac{8}{15}.$$





Lift force, gravity force, and drag force (can be neglected) act on an airplane when it flies horizontally. Let the point of application of the lift force be at a distance x from the nose of the plane.

- 1. Investigate the dependence x(L) for at least 15 lengths L with L>8,0 cm. Plot a graph of this dependence.
- 2. Assuming  $x = \xi L$ , find  $\xi$ .

Equipment. A4 paper (basis weight  $\sigma \approx 80 \text{ g/m}^2$ ), scissors, ruler and whatever you want.

First hint — 07.06.2021 14:00 (GMT+3)

Second hint — 08.06.2021 14:00 (GMT+3)

The Finals of the LPR Cup - 11.06.2021 12:00 (GMT+3)