



LPR Cup

9.s01.e06

Hint 2



Hint 2

IMPORTANT! The next task is both a hint and an alternative to the main task. Three important points:

1. You can continue to send the solution to the main problem.
2. At any time before the final deadline, you can switch to *alternative task*. If you do this, write *at* the very beginning of the solution I'm moving on to an alternative task!. In this case, you get an additional coefficient of 0.7, which is multiplied by the old coefficient, and the solutions to the main problem are not checked from this point on. Be careful!
3. The task consists of several items. The penalty multiplier earned by **before** is applied to all points. In the future, each item is evaluated as a separate task. If you send a solution without any item, this item's solution is considered as Incorrect. For more information about scoring points for composite tasks, see the rules of the Cup.

Alternative Problem

Brick and Oak

Pasha Shishkin has concrete and oak planks. He needs to most effectively insulate the room using available materials. The specific thermal conductivity of oak is greater than that of concrete — $\chi_{\text{oak}} > \chi_c$ (see the main problem). Each material has a volume of 5 m^3 .

1. How can materials be distributed most efficiently? (5 points)
2. What temperature will be maintained in the room if the room is the same size as in the main problem? (5 points)

Heater power $N = 2,5 \text{ kWt}$, outdoor temperature $T_0 = -4^\circ \text{C}$.