Dr., Sasha
OK.
If this task is complex, you miss the problem and go on solving the next task6.
However, I have couple of questions you can possibly answer about the task 0) from the collection of task5.
From experimental data, we can see in pictures below that the drag force $F_{drag}(\mathrm{v}) = F_x(\mathrm{v}) = F_D$ and the lift force $F_{lift}(\mathrm{v}) = F_y = F_L$ have different asymptotic behavior as velocity goes to infinity. Can you give me an explanation why the drag force decrease as velocity increases? Do you think that $F_D \propto \frac{C}{|\mathrm{v}|^n}$ or $F_D \propto e^{-C\cdot|\mathrm{v}|^m}$