# 10th IYNT 2022; Tskneti, Georgia
# Problem 16. Flying Seeds

Reviewer: David Roth

Team Romania - Limitless 3.0

21-28 August 2022

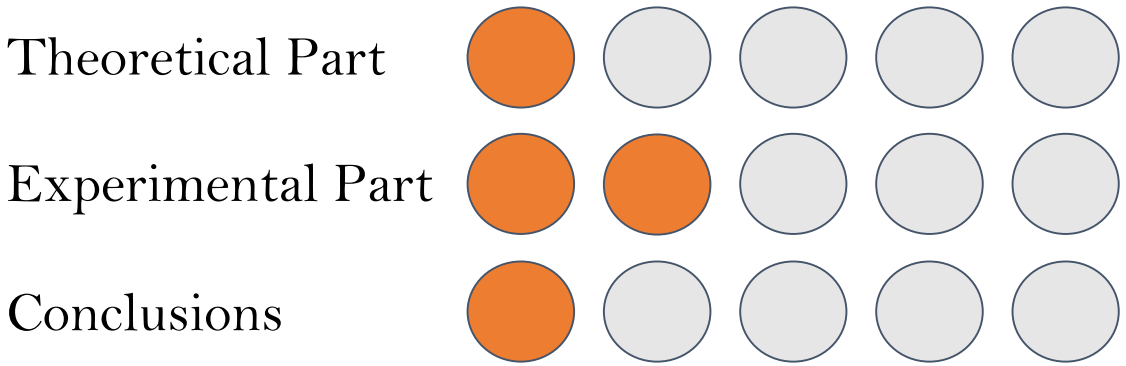
# Summary

***Proposed problem statement***

Investigate and describe **characteristics and movements** of **helicopter seeds**.

# Report

| Strong points | Weak points |
|---|---|
| 1. The reporter varied the type of seed<br>2. Had a good understanding of the parameters that he had to vary<br>3. Compared the seed types<br>4. Explained how every seed will fall<br>5. Good explanation of parameters | 1. Did not explain the physics behind the phenomenon<br>**2. No explanation of the phenomenon**<br>3. No correlation between theoretical part and experimental part<br>4. Poor time management<br>5. To much theory not correlated to the problem statement<br>6. No hypothesis and no conclusions<br>7. Did not mention **errors, parametres, way to calculate the speed**<br>8. Did not explain why the experimental results are true or how they relate experimentally<br>9. Did not explain why a seed falls faster than another one |



# Opposition

| Strong points | Weak points |
| --- | --- |
| 1. Asked relevant questions about the phenomenon<br>2. Understood the experiment<br>3. Took in consideration more **parameters** (ex:mass)<br>4. Focused proportionally on the theoretical part and the experimental part<br>5. Gave interesting discussion topics<br>6. Had a good answer to the question of the reviewer | 1. Did not try to give solutions to the problems he observed<br>2. The questions were focused only on physics, not considering biology. |

# Discussion topics

1. Q: Do you think that dropping the samara using your hand could involve human error(different angles, initial velocity etc)?
   A: We couldn’t take a video from a tree.  OPP
1. Q: If you had used a claw, would have been more accurate?
   A: It wouldn’t make any difference.  OPP
1. Q: Why does it start to spin?
   A: The wing has the shape of a circle.  OPP
1. Q: Why does it spin only after a period of time?
   A: Did not answer the question.  OPP
1. Q: How did you analyze the data on the flight of the seed?
   A: Didn’t analize  OPP
1. Q:How did you make sure that the environment is enclosed and that there aren’t any disturbances when varying the experiments?
   A:  There was no wind (measured by going out)  OPP
1. Q:When you varied the seeds, didn’t other parameters also vary(imperfections, veins etc)?
   A: Because the air can come out from the top  OPP