



# Review: Sinking paper clips

Name of the opponent, Team Bulgaria



## Problem 21:

In a well-known physics demonstration, small objects (e.g. paper clips, pins, or needles) stay afloat on water. If a small amount of soap is then added to water, some of the floating objects instantaneously sink. Investigate the critical conditions of sinking.

# Reporter



1. Basic explanation of surface tension of water
2. Did the experiment with different types of solution
3. Differed the object on the surface



1. No quantitative theory
2. Very basic analysis
3. No photos or videos of the process in the presentation
4. Didn't use the theory to justify the experiment and the results
5. No quantities of the chemicals
6. Speed measured by eye (no quantitative results)
7. No experimental setup
8. Not enough measurements
9. Not enough experimental data
10. No data analysis
11. No limits of theory
12. Inaccurate amount of soap used

# Opponent



1. Asked if with different soaps would affect the results
2. Didn't try enough small shapes-mentioned it



1. Asked questions that didn't have to do a lot with the experiment
2. Didn't want clarification of theoretical model
3. Focused on materials, not the execution of the experiment
4. No prioritization in the statement
5. Focused too much on different soaps after reporter said they had 1 available
6. No opinion expressed on the questions



# Clash



1. Mass of the sinking object
2. Shape of the sinking object
3. Theory behind the phenomena