



# Review - Problem No. 21

## Reaction time

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# Reporter - Pros & Cons

1. Excellent definition of the phenomenon.
2. Presence of visual aid & demonstrations.
3. Well-conducted experiments.
4. Possible errors were included.
5. Interesting results.

1. Some theory wasn't relevant to the phenomenon. (about the physics of the balloon & ball)
2. Lack of hypotheses
3. Very few constants.
4. Investigated the problem from a physics' perspective without mentioning other neurological factors that affect the reaction times of the team members.
5. Not enough parameters tested such as the handedness of people, the age, the gender, stress.
6. No error bars on the graphs.

# Opponent - Pros & Cons

1. She asked a lot of questions.
2. Highlighted the presence of graphs and tables
3. Noticed the missing variables.

1. No presentation.
2. She didn't notice the lack of parameters tested such as the left handedness of people, the direct peripheral vision, stress.
3. Missed that there were no error bars in the graphs
4. Missed the lack of relevant parameters.

# REPORTER VS OPPONENT- POINTS DISCUSSED

## Reporter



- Answered about the differences across the curves.
- Answered about the mass of the object instead of the body weight.
- Said that the height of the object does not affect the results.
- Replied that there were no injuries to the subjects.
- Said that the reaction time does not matter, what matters is whether the object can be caught or not.

## Opponent



- Asked about the diagram
- Asked how body weight affects the results.
- Asked about the contribution of height to the experiment.
- Asked about possible injuries of the members.
- Asked about the correlation between the reaction time and the distance between hands.



# Our opinion

We firmly believe that the graphs could have been more clear.

We also believe that the shape of the object plays a significant role.

It is our firm opinion that the body mass does not affect the result but the physical condition.

In our opinion the reaction time is what matters, as this is what the problem stated.



# Suggestions for further improvement

About the reporter:

- 1) Take more measurements per experiment in order to have even more valid results
- 2) Examine more parameters such as if there is presence of auditory stimuli, the left handedness of the people who participated in the experiment.
- 3) Include error bars in your experiment.
- 4) Keep constants.

For the opponent :

- 1) Investigate the role of the gender and the age to the outcome (as well as the role of other parameters).



YOU **ALL**

FOR

YOUR ATTENTION