



Regulations of the New Zealand Young Physicists' Tournament Qualification event for the International Young Physicists' Tournament

I. International Young Physicists' Tournament and the NZYPT

The International Young Physicists' Tournament (IYPT) is a competition among teams of secondary school students testing their ability to solve complicated scientific problems, to present solutions to these problems in a convincing form and to defend them in scientific discussions, called Physics Fights (PF).

The New Zealand Young Physicists' Tournament (NZYPT) is the official qualification tournament for New Zealand students and is open to all secondary school Physics students.

II. The problems of the IYPT

The problems are formulated by the International Organizing Committee (IOC) of IYPT and sent to the participating countries not later than in October. The National Organising Committee (NOC) selects seven of these problems to be used in the qualification competition NZYPT.

III. The participants of the NZYPT

1. School teams

Any school in New Zealand is able to request entry into NZYPT prior to the published deadline. A school is usually represented by one team but an application can be made to the NOC to enter a second team. In cases where a school does not have enough suitable students, schools may combine, at the discretion of the NOC, to form a team.

2. Entry Fee

The entry fee is \$100 per team.

3. Late entries

The decision about the participation of such a team is taken by the NOC.

4. The membership of the teams

An NZYPT team is composed of three secondary school students. The composition of the team cannot be changed during the tournament. The team is headed by a captain who is the official representative of the team during the PF.

5. Team Leaders

The team is accompanied by a teacher who is the team leader.

IV. The Jury

The Jury is nominated and organized by the NOC. It consists of members of universities and schools. The team leader from each team is included in the Jury. Ideally the team leaders should not be members of the Jury in the PF where their team participates and should not, if possible, grade the same team more than twice.

V. The agenda of the NZYPT

The NZYPT tournament is held during a period determined by the NOC (from February to April). All teams participate in a one-day Regional Tournament in either Auckland, Wellington or Christchurch. The Local Organising Committee (LOC) is responsible for the conduct of the tournament in their region according to these IYPT NZ Regulations. The NOC decides on the members of the LOC.

In the Regional Tournaments all teams participate in three Selective PFs. The top two teams from each region compete in the National Final.

VI. The Physics Fight regulations

In the course of a PF the members of a team communicate only with each other. Before the beginning of a PF, the Jury and the teams are introduced.

Three or two teams participate in a PF, depending on the total number of teams. The PF is carried out in three (or two) Stages. In each Stage, a team plays one of the roles: Reporter, Opponent, Reviewer (or Observer). In the subsequent Stages of the PF, the teams change their roles according to the scheme:

	Stage 1	2	3
Team			
1	Rep	Rev	Opp
2	Opp	Rep	Rev
3	Rev	Opp	Rep

In the Regional Tournaments the role of Reviewer is replaced by the role of Observer. In the case of two team PFs there will be no Observer role.

VII. The Stage regulations

The performance order in the Stage of a PF:	Reserved time in minutes
The Opponent challenges the Reporter for the problem	1
The Reporter accepts or rejects the challenge	1
Preparation of the Reporter	5
Presentation of the report	12
Questions of the Opponent to the Reporter and answers of the Reporter	2

Preparation of the Opponent	3
The Opponent takes the floor, maximum 5 min, and discussion between the Reporter and the Opponent	15
Questions of the Reviewer to the Reporter and the Opponent and answers to the questions	3
Preparation of the Reviewer	2
The Reviewer takes the floor	4
Concluding remarks of the Reporter	2
Questions of the Jury	5
Grading	

VIII. The team performance in the Stages

The Reporter presents the essence of the solution to the problem, attracting the attention of the audience to the main physical ideas and conclusions. Standard devices for presentation are whiteboard and computer datashow projector. For further devices the teams should consult the organizers.

The Opponent puts questions to the Reporter and criticizes the report, pointing to possible inaccuracy and errors in the understanding of the problem and in the solution. The Opponent analyses the advantages and drawbacks of both the solution and the presentation of the Reporter. The discussion of the Opponent should not become a presentation of his/her own solution. In the discussion, the solution presented by the Reporter is discussed. The opposition report may be presented using a computer datashow projector.

The Reviewer presents a short estimation of the presentations of Reporter and Opponent. This may be presented using a computer datashow projector.

The Observer does not participate actively in the PF.

During one PF only one member of a team takes the floor as Reporter, Opponent or Reviewer; other members of the team are allowed to make brief remarks or to help with the presentation technically. In the Regional Tournament no member of the team may take the role of Reporter more than twice.

IX. The rules of problem-challenge and rejection

1. All problems presented in the same PF must be different.

2. *Selective PF*

The Opponent may challenge the Reporter on any problem with the exception for a problem that:

a) was presented by the Reporter earlier;

- b) was opposed by the Opponent earlier;
- c) was presented by the Opponent earlier.

If there **are no problems** left to challenge, the bans c), b), a) are successively removed, in that order.

During the Selective PFs the Reporter may reject the challenge of **two different problems** in total without penalty. For every subsequent rejection, the coefficient of the Reporter (see section X), is decreased by 0.2. This reduction continues to apply during the following PFs. (A second rejection of the same problem does not cause a change to the coefficient).

X. The grading

After each Stage the Jury grades the teams, taking into account all presentations of the members of the team, questions and answers to the questions, and participation in the discussion. Each Jury member shows integer marks from 1 to 10.

The highest and lowest marks from the jury are averaged and added to the other jury marks. The mean of these marks is evaluated.

The mean marks are multiplied by various coefficients:
3.0 or less (see section IX) for the Reporter, 2.0 for the Opponent, 1.0 for the Reviewer and then transformed into points.

XI. The resulting parameters

1. For a team in the PF

The sum of points (*SP*) is the sum of mean marks, multiplied by the corresponding coefficients and rounded to one decimal place.

2. For a team in the Regional Tournament

The total sum of points (*TSP*) equals the sum of *SPs* of the team in all Selective PFs. If there is a tie in the Regional Tournament, the team with the top report mark wins.

XII. The National Final of the NZYPT

The top two teams from each Regional Tournament qualify for the Final. In the Final there are two PFs.

The first PF in the Final will be a selective PF. The first placed teams from each region compete against each other and the second placed teams from each region compete against each other. The order in which the teams perform the roles will be determined by draw.

The second PF of the Final will be an elective PF. The top three teams from the first PF of the Final compete and the bottom three teams compete. Each team chooses a problem to report in order of *SP* from the first PF of the Final. The Regulations for this PF are the same as the Stage Regulations except that there is no challenge or response to the challenge.

During both PFs of the National Final no member of a team may take the floor more than once during one PF.

The winner is determined by the total of the *SPs* of the two PFs of the Final.

The Selection Committee chooses five students to join the winning team as the New Zealand squad. The Selection Committee then selects the five New Zealand team members from this squad.

The team leader of the team winning the National Final is invited to attend IYPT as a Team Leader of the New Zealand team, provided some of their team is selected for the New Zealand team. Other team leaders are offered a place as a leader of the New Zealand team in order determined by the number of members in the New Zealand team and the placing of their team in the National Final. These other team leaders will be chosen at the discretion of the NOC. Any team leaders or jurors accompanying the New Zealand team to IYPT must take part in and facilitate team training.

XIII. The status of the regulations of the NZYPT

These regulations are established by the NOC and may be changed only by the NOC.

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