PAKISTAN TOURNAMENT OF YOUNG MATHEMATICIANS (PTYM) 2024

RULES AND FORMAT

In adherence to the regulations outlined by the Pakistan Young Innovative Minds' Society (PYIMS), this document serves as an official notice for participants engaging in PTYM 2024.

Problem Selection for Preliminary Round

- Participants are required to carefully choose one problem (of their choice) from the ITYM 2023 collection for the preliminary round.
- This selection is crucial, reflecting individual preferences and strengths.
- Problems and proposed solutions from ITYM 2023 are available on the ITYM website for thorough examination.
- Participants need to consider the intricacies of each problem before making a selection.

Submission Details for Preliminary Round

- All submissions for the preliminary round are to be sent to PYIMS at 'ptym.info@gmail.com'.
- Participants should include:
- First Submission (31st January 2024): Progress made on the chosen problem along with the initial solution.
- Second Submission (15th February 2024): An improved version of the initially submitted solution.
- Third Submission (29th February 2024): Further improvements on the second solution.

Preliminary Round Regulations

- Participants are allowed to solve only one problem from ITYM 2023.
- Strict adherence to this rule is crucial, and multiple submissions from the same participant are prohibited.

Quizzes

- First Quiz (5th March 2024): Assessing participants on various mathematical topics.
- Second Quiz (15th March 2024): Focused on problem-solving skills, particularly related to the chosen problem.

Team Formation

- PYIMS Core Committee will strategically form teams based on individual performances post quizzes.
- This process involves meticulous consideration of individual achievements, ensuring fair team compositions.

PYIMS Board Deliberations

- The PYIMS Board will carefully select problems for PTYM 2024 after in-depth discussions. These problems will be drawn from the ITYM 2024 collection, ensuring a challenging yet fair competition.

Regional and Final Rounds

- Regionals (18th-19th May 2024): Selected participants will engage in regional competitions and the best-performing teams will be selected to represent their respective regions in the final round.
- Finals (20th-21st July 2024): The competition will culminate at the grand finals, marking the pinnacle of PTYM 2024.

This notice provides an elaborate guide for participants, emphasizing the importance of thoughtful problem selection in the preliminary round, providing details about the quizzes, and adherence to stipulated rules for a fair and competitive PTYM 2024.

NOTE: The aforementioned dates are considered final. If the scheduled dates for the conduction of ITYM'24 are subject to change, PYIMS reserves the right to adjust the dates for the Regional and National events. Furthermore, PYIMS may also exercise the discretion to omit submissions and alter quiz numbers.

nooreiman56@gmail.com
ptym.pyims@gmail.com
ptym.info@gmail.com
+92 349 9682857
+92 310 5646681
Office no. 10 Kashmir Mansion, Commercial Area, Pakistan Town, Sector 0-9, Islamabad

SAMPLE

15th International Tournament of Young Mathematicians, 2023

Problem 6.

Team: Germany (1)

August Rehdorf

Abstract

We consider some diophantine equations in two variables, which we want to solve in the integers or modulo some integer.

Question	Letter	Result
1	a,b	solved
2	a	found paper which makes it easy to find examples theory
3	a,b	solved

Contents

4 Literature

1. Michael A. Bennett and Amir Ghadermarzi, 'Mordell's equation: a classical approach', https://www.cambridge.org/core/services/aop-cambridge-core/content/view/CB62147F66768E3777082ABC1DBFCE27/S1461157015000182a.pdf/mordells_equation_a_classical_approach.pdf, LMS J. Comput. Math. 18 (1) (2015) 633–646

2. KCd, https://math.stackexchange.com/questions/875983/solutions-to-the-mordell-
2014