





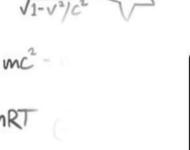


## MATHEMATICS ASSOCIATION, IIT BOMBAY

On 10th February, 2024

Level 1: Classes 9-10

Level II: Classes 11-12





Scan above for the official website of IITB MO'24

Registration Fees: ₹350 Deadline: 31st January, 2024

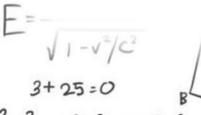
## Contact Us:

Website:- math.iitb.ac.in/~assoc/mo\_2024/

Insta:-@maths\_olympiad\_iitb

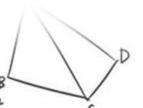
Contact: - 8104952134

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· n(1+

i= n - 1





2 v2/c2

F=d

For Classes 9-10:

Find the greatest natural number N such that, for any arrangement of the numbers 1, 2, . . . , 400 in a chessboard 20×20, there exist two numbers in the same row or column, which differ by at least N.

## For Classes 11-12:

A finite set S of real numbers is called "unsaturated" if for any finite subset T of size at least 2, the sum of elements of T is not an element of S. Given a finite set A of positive real numbers, prove that there exists an unsaturated subset of A having size at least V|A|

Think you can solve the question?
Then mail us the answer at olympiad@math.iitb.ac.in and you can win prizes for elegant solutions.

## ABOUT US:

India's oldest Mathematical olympiad is back for its 39th edition. The IITB Math Olympiad is an annual event organized entirely current students of the Mathematics department at IIT Bombay. It boasts original problems require creative insight and help build mathematical experience and maturity. It also provides an excellent opportunity to view the academic atmosphere of IIT Bombay, one of the premier academic institutes of the country.