



# ALL INDIA COUNCIL FOR TECHNICAL SKILL DEVELOPMENT

अखिल भारतीय तांत्रिक कौशल्य विकास परिषद

## Ramanujan National Maths Challenge

A National Maths Scholar Search Program



**Prize Money -  
Upto Rs.2 Lakhs**



**National  
Certificate - For  
Every  
Participant**



**National  
Trophy**



**National Medal**

**Please Note** - All participants will receive a participation certificate, even if not selected in the final. These certificates are highly regarded in India and are awarded by AICTSD at the national level. The certificate holds substantial value and has the potential to significantly boost your academic and professional career.

# Syllabus - Class 8

## HCF & LCM

- Hcf
- Lcm
- Prime Factorisation
- Hcf By Prime Factorisation
- Lcm By Prime Factorisation
- Lcm By Division Method

## Percentages

- Expressing Fractions As Percentages
- Converting Percentages To Fractions
- Expressing Percentages As Decimals
- Expressing Decimals As Percentages
- Finding Percentage Of A Number
- Money And Metric Measures As Percentages
- Why Do We Use Percentages?

## Ratio And Proportion

- Introduction
- Ratio
- Proportion
- Unitary Method

## Perimeter And Area

- Introduction
- Squares And Rectangles
- Area Of A Parallelogram
- Area Of A Triangle
- Circles
- Conversion Of Units
- Applications

## Profit And Loss

- Profit And Loss
- Finding Selling Price
- Finding Cost Price

## Comparing Quantities

- Introduction
- Equivalent Ratios
- Percentage Another Way Of Comparing Quantities
- Use Of Percentages
- Prices Related To An Item Or Buying And Selling
- Charge Given On Borrowed Money Or Simple Interest

## Problem on Trains

- Train Speed Calculations
- Train & Platform Measurements
- Train Arrival & Departure calculations

## Area And Volume

- Area

- Finding Area When Whole Squares Are Not Covered
- Area Of Irregular Shapes
- Area Of A Rectangle Or Square
- Finding Length Or Breadth
- Perimeter
- Volume
- Volume Of A Cube
- Volume Of A Cuboid

## Surface Area And Volumes

- Introduction
- Surface Area Of Cuboid And A Cube
- Surface Area Of A Right Circular Cylinder
- Surface Area Of A Right Circular Cone
- Surface Area Of A Sphere
- Volume Of A Cuboid
- Volume Of A Cylinder