



# 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 7

## 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?

## 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

## Time & Work

- Problem on time & work calculation
- Finding Number Of Days From One Date To Another

- **Railway And Air Timings**
- **Time Intervals**

## **Algebraic Expression**

- **Introduction**
- **How Are Expressions Formed?**
- **Terms Of An Expression**
- **Like And Unlike Terms**
- **Monomials, Binomials, Trinomials And Polynomials**
- **Addition And Subtraction Of Algebraic Expressions**
- **Finding The Value Of An Expression**
- **Using Algebraic Expressions Formulas And Rules**

## **Perimeter And Area**

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

## **Ratio And Proportion**

- **Introduction**
- **Ratio**
- **Proportion**
- **Unitary Method**

## Problem on Simple Interest

- Calculate Interest
- Calculate Profit / Loss
- Interest Appreciation / Depreciation

## HCF & LCM

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