National Mathematics Day activities for Class 9 and Class 10: Class 11

CBSE Math Revision · CBSE Class 11 (no calculator) · 22 December · Student sheet

Name _____ Class _____ Date _____

No calculator. Every answer works out exactly.

Starter (5 minutes)

1. Find the sum of the first 12 natural numbers.

2. Find $12^3 + 1^3$.

3. How many three-digit numbers have three different digits?

4. Find i^{1729}.

Main activity (30 minutes)

Task A: Sequences

Number patterns for Ramanujan’s birthday.

a. Find $1^3 + 2^3 + \ldots + 12^3$.

b. The AP 22, 29, 36, … is continued. How many of its terms are less than 1729?

c. Find $1 + 12 + 144 + 1728$.

Task B: Counting

The digits 1, 7, 2 and 9 are arranged to make four-digit numbers, each digit used once.

a. How many arrangements are there?

b. How many of them are odd?

c. How many of them are greater than 5000?

Extension

1. $1729 = 7 \times 13 \times 19$. Find the number of positive divisors of 1729 and their sum.