National Mathematics Day activities for Class 9 and Class 10: Class 6–8

CBSE Math Revision · MYP / KS3 (ages 11 to 14) · 22 December · Student sheet

Name _____ Class _____ Date _____

No calculator needed. Every answer works out exactly.

Starter (5 minutes)

1. Work out 12^3.

2. Work out 9^3.

3. Work out $10^3 + 9^3$.

4. Work out $1^3 + 12^3$. What do you notice?

Main activity (30 minutes)

Task A: Cubes and squares

Ramanujan loved number patterns.

a. Work out $1^3 + 2^3 + 3^3 + 4^3$.

b. Work out $(1 + 2 + 3 + 4)^2$. What do you notice?

c. What is the largest square number less than 1729?

Task B: A magic square

In a 3 by 3 magic square using each of 1 to 9 once, every row, column and diagonal has the same total.

a. Find the total of 1 to 9.

b. Find the magic total of each row.

c. Which number must go in the middle square?

Extension

1. In how many ways can 5 be written as a sum of positive whole numbers, ignoring order? (5 on its own counts, and so does 3 + 2.)