

CLASS 6

MATHS

REVISION NOTES

Class 6 Maths Chapter 3 Number Play Revision Notes

Quick revision notes for Class 6 Maths Chapter 3, "Number Play" -- key facts and formulas at a glance for fast last-minute review.

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Quick revision notes for **Class 6 Maths Chapter 3, “Number Play”** — key facts and formulas at a glance for fast last-minute review.

Supercells

A **supercell** is greater than all its orthogonal neighbours.

Largest number in a table is **always** a supercell; smallest is **never** a supercell.

No filled table can have **zero** supercells.

A 3×3 grid of distinct numbers can have at most **5 supercells** (checkerboard pattern: 4 corners + centre).

Digit Play

Smallest 2-digit number with digit sum 14 = **59**; largest 5-digit number with digit sum 14 = **95,000**.

Digit ‘7’ appears **20 times** from 1-100, and **300 times** from 1-1000.

Palindromes

A number reading the same forwards and backwards.

Smallest/largest 5-digit palindromes: **10,001** / **99,999** (sum 110,000, difference 89,998).

Kaprekar’s Constant

4-digit numbers: routine (descending – ascending, repeat) always reaches **6174** within 7 steps.

3-digit numbers: routine always reaches **495**.

Clock Palindromes

Consecutive palindromic times (10:01, 11:11, 12:21, ...) are always **70 minutes** apart.

Mental Math (Always/Sometimes/Never)

5-digit + 5-digit = 5-digit: **Sometimes**.

4-digit + 2-digit = 4-digit: **Sometimes**.

4-digit + 2-digit = 6-digit: **Never** (max sum is only 5 digits).

5-digit – 2-digit = 3-digit: **Never** (min result is still 4 digits).

Collatz Conjecture

Even → divide by 2; Odd → multiply by 3 and add 1.

Conjectured (unproven) to always eventually reach 1.

100 reaches 1 in **26 steps**.

Quick revision: [Solutions](#) | [Extra Questions](#) for this chapter.

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