CLASS 8 MATHS REVISION NOTES

Revision Notes: Class 8 Maths Chapter 3 A Story of Numbers

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Class 8 Maths Chapter 3: A Story of Numbers — Quick Revision Notes

Origins of counting: numbers began as one-to-one correspondence (tally marks, pebbles, notches) tied to specific objects, not abstract entities.

Grouping: Roman numerals introduced special symbols (V, X, L, C, D, M) for 'landmark' quantities instead of pure tallying.

Gumulgal system: a Pacific/Australian indigenous base-2 additive counting method using just two words (urapon=1, ukasar=2).

Base / landmark numbers: in a base-n system, landmark values are powers of n (1, n, n^2, n^3…); the Egyptian system used base 10 additively (repeat a symbol up to 9 times, then move to the next landmark).

Place value: pioneered by the Mesopotamians (base 60) — a symbol's position, not just its shape, determines its value, drastically reducing the number of symbols needed.

The zero problem: place-value systems without a true zero create ambiguity (e.g. Mesopotamian 60 vs 3605 both need placeholders for empty positions).

The Hindu (Indian) system: introduced zero as both a placeholder and a number in its own right — the final piece making a place-value system unambiguous and efficient with just 10 symbols.

Chinese rod numerals: alternated symbol orientation between place values purely to avoid visual misreading in a place-value system without gaps.

Any base works: numbers can be represented in any base (2, 4, 5, 7, 8…) — this chapter has students convert the same number across several bases to internalise the idea.

Why it matters today: the Hindu-Arabic base-10 system with zero underlies everyday arithmetic, and binary (base-2) place value underlies all modern computing.