CLASS 8 MATHS EXTRA QUESTIONS

Extra Questions: Class 8 Maths Chapter 3 A Story of Numbers

Practice questions beyond the textbook exercises, testing deeper understanding of number systems and place value for Class 8 Maths Chapter 3: A Story of Numbers.

Contents

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Extra Questions: Class 8 Maths Chapter 3 A Story of Numbers

1 (Short Answer). What are the landmark numbers of a base-3 system?
Solution: 3^0=1, 3&sup9;=3, 3^2=9, 3^3=27, 3^4=81…

2 (Numerical). Convert the base-10 number 50 into base-8.
Solution: 50 = 6×8+2 → **62** (base 8).

3 (Assertion-Reason). Assertion: Roman numerals are unsuitable for large calculations. Reason: Roman numerals have no place value and no symbol for zero.
Solution: Both true, and the reason correctly explains the assertion.

4 (Applied). Represent the number 1948 in Roman numerals.
Solution: **MCMXLVIII** (1000+900+40+8).

5 (Synthesis). Why couldn't a purely additive system like the Egyptian one ever represent negative numbers, while a place-value system with zero could eventually be extended to do so?
Solution: An additive system only combines positive quantities of symbols with no concept of 'direction' or a zero reference point; once zero exists as a true number and reference point in a place-value system, negative numbers can be defined as positions 'below' zero.

6 (Numerical). Convert 100 (base 5) back into base 10.
Solution: 1×25+0×5+0×1 = **25**.

7 (Short Answer). Name two ancient civilisations mentioned in this chapter that used a place-value system.
Solution: The **Mesopotamians** (base 60) and the **Chinese** (rod numerals); the **Hindu (Indian)** system later perfected it with true zero.

8 (Applied). Convert 25 into base 4.
Solution: 25 = 1×16+2×4+1×1 → **121** (base 4).

9 (Assertion-Reason). Assertion: Zero is essential in a place-value system. Reason: Zero acts as a placeholder to distinguish numbers like 60 and 600.
Solution: Both true, and the reason correctly explains the assertion.

10 (Numerical). Convert the binary number 11001 back to base 10.
Solution: 16+8+0+0+1 = **25**.