Indian Institute of Space Science and Technology

Department of Mathematics

Maths Club — Weekly Challenge #5

Date: November 10, 2025

Challenge Question	Difficulty: ★★★★★

Let $f(x) = x + x^2 + x^4 + x^8 + x^{16} + x^{32} + \cdots$. The coefficients of x^{10} in $f(f(x))$ is λ. Find the sum of digits in λ.

Instructions:

- Submit your detailed solution (typed or handwritten) by **21 Nov, 2025**.

- Use the link below for submission:

    Submit Here: Maths Club – Weekly Challenge Submission

- Selected solutions will be featured in the **Maths Club GitHub repository**.

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For queries: `mathsclub@iist.ac.in`