Mantis – Clockwork Jade Beetle

Inside the Jade Palace workshop, Mantis is responsible for maintaining a rare mechanical creature: the **Clockwork Jade Beetle**, a device used to measure precise attack timings.
 One morning, the beetle malfunctions. Instead of giving a *gradually adjusted timing*, it suddenly starts jumping to extremely large values.

Mantis explains that the timing mechanism is supposed to **increase or decrease the beetle's internal pulse by small fixed increments**, but after reviewing the notes, he discovers the formula multiplies the pulse when certain conditions trigger instead of adjusting it gradually.

Your task:
 Analyze how a system designed to make small incremental updates can accidentally become an exponential system due to a flawed logical step. Explain what kind of debugging strategy you would use to trace this error, what patterns indicate exponential growth, and how to reconstruct a correct incremental logic model for such a device.