**Outputs:**

1. Collatz conjecture series for any number n until it reaches 1.

A screen shot of a computer screen

AI-generated content may be incorrect.

For any random numbers in single to ten digits, they converge in a few hundred steps.

1. Finding length of Collatz conjecture series for a range of numbers (until n) and frequency of the lengths.

A graph with a red line

AI-generated content may be incorrect.

The length has a lot of fluctuations, with average increasing slightly only with numbers, until 1000 (slope of the trend line). The story remains the same when checked with other ranges like 10,000, 100,000, etc.

1. Plotting lengths of series and its frequency for numbers (until n) and normal curve fitting (2 normal curves (a Gaussian mixture) captures the shape better).

A graph of a number of columns

AI-generated content may be incorrect.

This is plotted for a range of numbers until 1000, but the story remains the same when checked for number ranges like 10,000, 100,000, etc.