



3. Calculation of $\sin(x)$ as a Series

The sine function can be expressed as:

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots$$

Algorithm

1. Start.
2. Read x (in radians) and n (number of terms).
3. Initialize `sin_x = 0` and `sign = 1`.
4. For $i = 1$ to n , do:
 - Compute term = `sign * xi / i!`
 - Add term to `sin_x`
 - Flip `sign` ($-1 \times \text{sign}$)
5. Print `sin_x`.
6. Stop.

Ask anything



Search



Reason

