Volume filling factor of hypersphere inscribed in hypercube

- Analytic answer
- Monte Carlo (N = 10^6)

The graph shows the relationship between the number of dimensions, N, and the probability of the volume ratio of a hypersphere to a hypercube. The analytic answer is represented by a straight line, while the Monte Carlo simulation results are indicated by triangular markers.

The y-axis represents the probability (p) of the volume ratio, ranging from 1e-08 to 1, and the x-axis represents the number of dimensions, N, ranging from 2 to 20.