

## Estimating Pi using Monte Carlo

To estimate Pi, N pebbles are thrown at the figure given in the question.

Number of pebbles landing in the square  $\propto$  Area of square  $\propto 1$

Number of pebbles landing in the quarter circle  $\propto$  Area of quarter circle  $\propto \pi/4$

Therefore,  $\pi \approx 4 * \text{Number of pebbles landing in quarter circle} / \text{Number of pebbles landing in square}$

Doing this estimation for different values of N, we get the following result:

