

Monte Carlo Simulation

Note Title

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calc of π

hits = 0

for $i = 1$ to # darts

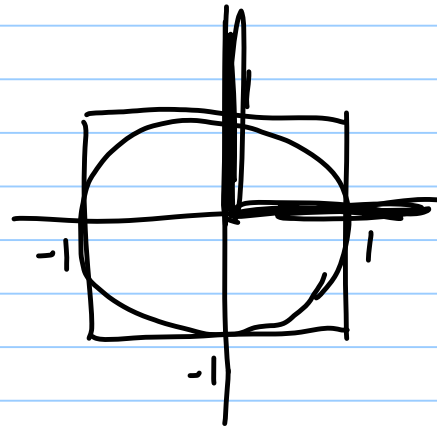
$x = U(0, 1)$

$y = U(0, 1)$

if $x^2 + y^2 \leq 1$

hits++

end
return hits



dm ^{barrizingly}
parallel

random numbers

pseudo-random

linear congruential alg.

a, c, m constants

$$X_{n+1} = (aX_n + c) \bmod m \quad (1)$$

X_0 is seed

use X_n to determine X_{n+k}

$$X_{n+k} = (A X_n + C) \pmod{m} \quad (2)$$

where

$$A = a^k$$

$$C = c \left(\frac{a^k - 1}{a - 1} \right)$$

use (1) to send k processes

11 (2) to stride through seq.

