Pseudocode:

Algorithm: Will the inner triangle of a circle contains the center?

Procedure : circle (N) # N is the number of simulation

Initial P=0

for $i = 1.2.\cdots.N.$ do

$X = (0.0.0)$

$Y = (0.0.0)$ # initial X.Y

for $j = 1.2.3.$ do

$X_j \sim U(-1.1)$

$Y_j \leftarrow (1-X_j^2)^{\frac{1}{2}} \times (2.\text{Bernolli}(\frac{1}{2}) - 1)$

$a = (x_1-x_2)^2 + (y_1-y_2)^2$

$b = (x_2-x_3)^2 + (y_2-y_3)^2$

$c = (x_1-x_3)^2 + (y_1-y_3)^2$

if $a+b-c>0$ and $a+c-b>0$ and $b+c-a>0$

$P = P+1$

return P/N.
