



Assume the radius of the circle is `1`. Therefore, the circle area is  $\pi$  and the square area is `4`. Randomly generate a point in the square. The probability for the point to fall in the circle is `circleArea / squareArea =  $\pi$  / 4`.

Write a program that randomly generates 1,000,000 points in the square and let `numberOfHits` denote the number of points that fall in the circle. Thus, `numberOfHits` is approximately `1000000 * ( $\pi$  / 4)`.  $\pi$  can be approximated as `4 * numberOfHits / 1000000`. Write the complete program for estimating  $\pi$ .