

```

import java.util.Random;
import java.util.Scanner;

public class IterationsExcercisesDartThrowingSimulation {

    public static void main(String[] args) {
        System.out.println("Please type the number of darts you want to throw:");
        Scanner floof = new Scanner(System.in);
        int dartThrows = floof.nextInt();
        floof.close();
        Random randy = new Random();
        double numberOfHits = 0.0;

        for (int throwNumber = 1; throwNumber <= dartThrows; throwNumber++) {
            double xValue = randy.nextDouble();
            int xPosNeg = randy.nextInt(2);

            if (xPosNeg == 0) {
                xValue = xValue * -1;
            }

            double yValue = randy.nextDouble();
            int yPosNeg = randy.nextInt(2);

            if (yPosNeg == 1) {
                yValue = yValue * -1;
            }

            double xSquare = Math.pow(xValue, 2);
            double ySquare = Math.pow(yValue, 2);
            double radius = Math.sqrt(ySquare + xSquare);

            if (radius <= 1 && radius >= -1) {
                numberOfHits++;
            }
        }

        double piValue = numberOfHits / dartThrows * 4;
        System.out.println("The value of pi is: " + piValue);
    }
}

```

This is what it looks like when the code is run. The black text is what the code displays and the green text is the user input.

Please type the number of darts you want to throw:

1000

The value of pi is: 3.08

Please type the number of darts you want to throw:

1000

The value of pi is: 3.168

Please type the number of darts you want to throw:

500

The value of pi is: 3.136

Please type the number of darts you want to throw:

100

The value of pi is: 2.8

Please type the number of darts you want to throw:

10

The value of pi is: 3.2

Please type the number of darts you want to throw:

5

The value of pi is: 1.6