Problem of the Week

Problem 6 (due on Monday, April 25)

$n$ points are chosen randomly and independently on a circle, each with the uniform distribution. What is the probability that all $n$ points are contained in some closed semicircle?

Overview

Every other Monday (starting 01/31/22), we will post a problem to engage our mathematical community in the problem solving activity and to enjoy mathematics outside of the classroom. Students (both undergraduate and graduate) are particularly encouraged to participate as there is no better way to practice math than working on challenging problems. If you have a solution and want to be a part of it, e-mail your solution to Marcin Mazur (mazur@math.binghamton.edu) by the due date. We will post our solutions as well as novel solutions from the participants and record the names of those who’ve got the most number of solutions throughout each semester.

When you submit your solutions, please provide a detailed reasoning rather than just an answer. Also, please include some short info about yourself for our records.

Previous Problems and Solutions

- Problem 5 Solved by Leo Kargin (a 9-th grader from San Francisco !)
- Problem 4 No solutions were submitted.
- Problem 3 Solved by Ashton Keith.
- Problem 2 No solutions were submitted.
- Problem 1 Solution submitted by Ashton Keith.
  - Fall 2021
  - Spring 2021
  - Fall 2020
  - Summer Challenge
  - Spring 2020