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Pi Simulation Report

CSCI 317J

**1. How many darts did you need in a game in order to reliably compute Pi to 3 digits (3.14)?**

Firstly, I want to see if the number of games or the number of darts throw per game affect the pi prediction the most. I run test on low number of games and high number of games with the same amount of darts. Then I run test on the same number of games but with high and low number of darts per game. I came to a conclusion that both the number of games and the number of darts affect the pi prediction, and higher number of game and number of darts will give more accurate prediction. In my case, I believe average number of darts need per game is 100,000 darts. However, the number of games above 10 game don't really affect the predictions. Such as I don't see a different between 10 games – 100,000 darts and 20 game – 100,000 darts. Thus, I stick with 10 games – 100,000 darts per game.

**2. What was the standard deviation in this case?**

The standard deviation for average pi result: 3.1402 was 0.004651124595192049