Discussion 3: Week 2 - Stats 100 A

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Homework 1 Survey

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- Remember if you're ever unclear about a topic, please feel free to address your questions to Prof. Wu during lectures.

Problem 2 (1)

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Determine $P(X^2 + Y^2 \leq 1)$ by measuring an area.

Problem 2 (1)

Problem 2 (2)

Suppose we repeat the experiment n times. For large n how, how often $X^2 + Y^2 \leq 1$? Suppose it happens m times, can you calculate π based on m and n?

Problem 2 (2)

Problem 2 (3)

Calculate $P(X \geq \frac{1}{2})$ and $P(X \geq \frac{1}{2} \mid X + Y \geq 1)$

Problem 2 (3)

Problem 2 (4)

Let A be the event that $X \in [.2, .6]$ and B be the event that $Y \in [.3, .5]$. Show that $P(A \cap B) = P(A)P(B)$

Problem 2 (4)

Problem 3 (Buffon's Needle)

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Estimate π using the Buffon Needle experiment

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Problem 3 (Lazzarini's Lie)

Thank You / Questions

Contact:

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