

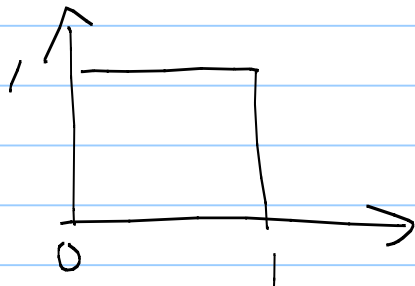
HW2. Q6: Consider a best-of-three series.

What is the sample space.

A: $S = \{AA, ABA, BAA, BB, BAB, ABB\}$

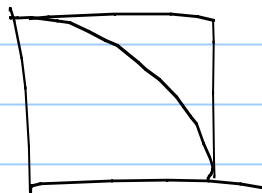
HW2Q14

X, Y are chosen randomly in the interval $(0, 1)$



Q: $P(X^2 + Y^2 \leq 1)$

Ans:



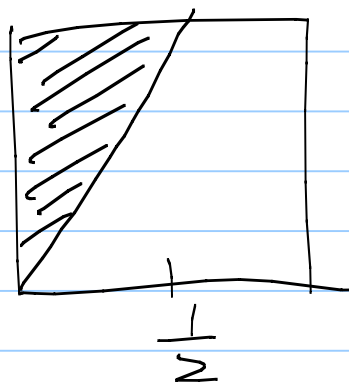
\Rightarrow

$$\frac{\frac{\pi \times 1}{4}}{1} = \frac{\pi}{4} \#$$

Q: WA?
 Ans: Prob the "relative area" of the region
 A very heuristic method of W.A.

Q: $P(Y > 2X)$

Ans:



\Rightarrow

$$\frac{\frac{1}{2} \times 1 \times \frac{1}{2}}{1} = \frac{1}{4} \#$$