CS70 Geometric and Poisson Distributions

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Overview

- Geometric Distribution
- Memoryless Property
- Poisson Distribution
- 4 Sum of Independent Poisson Random Variables

• $X \sim \text{Geo}(p)$.

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- PMF:

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• Expectation:

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Variance:

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$$\operatorname{Var}(X) = \frac{1-p}{p^2}.$$

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Recall the **Taylor series expansion** from calculus:

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Variance:

$$Var(X) = \lambda$$
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Problem Time!