

Title: Discrete Random Variables (AI 4.7)

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Subject and/or related curriculum/pedagogy: DP Mathematics AI 4.7

Audience: Students

Learning time: Approximately 3-4 hours

Overview:

This set begins with a guided inquiry that leads students from the familiar use of tree diagrams for probability into probability distributions. There are two Desmos activities—one for consolidation and one which introduces the concept of expectation and fair games. Three additional handouts allow students to practice these skills.

Subject guide content covered includes:

- Concept of discrete random variables and their probability distributions
- Expected value (mean), $E(X)$ for discrete data
- Applications

Teacher materials included in this set:

- Teacher Notes 1: Introducing Probability Distributions
- Teacher Notes 2: Venn Diagrams
- Teacher Notes 3: Applications Questions
- Teacher Notes 4: Which Game?

Student materials included in this set:

- Handout 1: Introducing Probability Distributions
- Handout 2: Venn Diagrams
- Handout 3: Applications Questions
- Handout 4: Which Game?