Random Variables and Probability Distributions

Today's Standard

HSS.MD.A1 - (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.

Cues	Notes
What is a random variable?	A random variable assigns a numerical value to each event in a sample space.
How do you define a random variable?	To define a random variable, assign numerical values to outcomes of interest.
What is a probability distribution?	A probability distribution shows the likelihood of each outcome of a random variable.
How do you graph a probability distribution?	Graph probability distributions using histograms, bar graphs, or other data displays.
What is the difference between a probability distribution and a frequency distribution?	A probability distribution represents likelihoods, while a frequency distribution shows occurrences.

Summary

Understanding random variables and probability distributions is crucial for analyzing and interpreting data. This standard helps students assign numerical values to events and graph their likelihoods, distinguishing between probability and frequency distributions.