



Probability and Relative Frequency

Today's Standard

7.SP.C6 - Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.

Cues	Notes
What is probability?	Probability is the measure of the likelihood that an event will occur.
How do you approximate probability?	Approximate probability by collecting data and observing long-run relative frequency.
What is relative frequency?	Relative frequency is the ratio of the number of times an event occurs to the total number of trials.
Why are large sample sizes important?	Large sample sizes help ensure that the observed relative frequency is close to the true probability.
What are common misconceptions about probability?	Misconceptions include thinking outcomes will match probabilities exactly and believing short-term results reflect long-term probabilities.

Summary

Understanding probability involves approximating the likelihood of events by collecting data and observing long-run trends. Key concepts include relative frequency and the importance of large sample sizes. Common misconceptions need to be addressed through evidence-based interventions.