Probability Models from Data

Today's Standard

7.SP.C7b - Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

Cues	Notes
What is a probability model?	A probability model is a mathematical representation of a random phenomenon.
How do you develop a probability model?	Develop a probability model by observing frequencies in data from chance processes.
What is an example of a non-uniform probability model?	A non-uniform probability model example: a biased coin with different probabilities for heads and tails.
Why are larger sample sizes important?	Larger sample sizes provide more accurate representations of probabilities.
What are common misconceptions about probability models?	Common misconceptions include thinking all probability models are uniform and small sample sizes are sufficient.

Summary

Probability models represent random phenomena. They are developed by observing data frequencies. Not all models are uniform, and larger sample sizes yield more accurate models. Common misconceptions involve uniformity and sample size sufficiency.