

Parent Guide to the

Probability Distributions & Expected Value

Today's Standard

HSS.MD.A3 - (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.

Real-World Applications for this Standard

Predicting outcomes in games of chance; Modeling risk in insurance; Forecasting in finance; Quality control in manufacturing; Evaluating strategies in multiple-choice tests

Today I Learned

Today we learned about probability distributions and how to find the expected value. This helps us understand the chances of different things happening.

Common Stumbling Blocks

Some kids might think all chances are equal, but they aren't always. They might also think the expected value is always a real outcome, but it's just an average.

Quiz Me

- What is a probability?
- Can all outcomes have different chances?
- What is an expected value?
- Does the expected value have to be a real outcome?
- Why do we use probability distributions?

Help Me

Probability distributions help us predict what might happen in real life, like guessing answers on a test or predicting weather. The expected value tells us the average outcome we can expect.