



Expected Payoff in Games of Chance

Today's Standard

HSS.MD.B5a - Find the expected payoff for a game of chance. For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.

Real-World Applications for this Standard

Calculating lottery ticket winnings; Determining expected value in casino games; Assessing risk in insurance policies; Evaluating return on investment in stock market; Predicting outcomes in sports betting

Today I Learned

Today, we learned about finding the expected payoff in games of chance. This means figuring out what we might win on average if we played a game many times, like a lottery or a game at a fast-food place.

Common Stumbling Blocks

Sometimes, kids think the expected payoff means they will definitely win that amount, but it's really just an average over many tries. Another tricky part is thinking the expected payoff is the same as the most likely outcome, but it's actually different.

Quiz Me

- What is expected value?
- How do you find the expected payoff?
- Can the expected value guarantee a win?
- Is the expected value the same as the most likely outcome?
- Name a real-life example of expected value.

Help Me

The expected payoff is like figuring out what you might win on average if you played a game many times. For example, if you bought many lottery tickets, the expected payoff helps you know about how much you might win in total. It helps us understand risks and make better choices.