# Decision Making with Probabilities

## Today's Standard

HSS.MD.B5 - (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.

| Cues | Notes |
|---|---|
| What is expected value? | Expected value is the average outcome when considering all possible outcomes and their probabilities. |
| How do you calculate probabilities? | Probabilities are calculated by dividing the number of favorable outcomes by the total number of possible outcomes. |
| Why is it important to weigh outcomes? | Weighing outcomes is important to make informed decisions that consider both the payoff and the likelihood of each outcome. |
| What are common misconceptions? | Common misconceptions include thinking higher payoffs are always better and that all outcomes are equally likely. |
| How can real-world examples help? | Real-world examples help illustrate the variability of probabilities and the importance of expected value in decision-making. |

## Summary

Understanding how to weigh possible outcomes using probabilities and expected values is crucial for informed decision-making. This involves calculating probabilities accurately and recognizing common misconceptions.