Review of Chapter 5 -11

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Chapter 5

What is probability
Probability is a measure of the likelihood of a random phenomenon or chance behavior. It describes the long-term proportion with which a certain outcome will occur in situations with short-term uncertainty.

what’s a probability event?
What is a simple event?
What is an event?
What’s ample space(S) of a probability experiment?

Probability of an event E is the likelihood of that event, denoted as \( P(E) \).
1. Properties of probability
2. two approaches to determine the probabilities of an event.
   ◦ the classical method
   ◦ the empirical method
3. the addition rule
4. the complement rule
1. Let E and F be two events.
   ◊ what does " E and F " represent?
   ◊ what does " E or F " represent?
   ◊ what does " \( \bar{E} \) " represent?
   ◊ what does it mean that E and F are mutually exclusive?
   ◊ what does it mean that E and F are independent exclusive?

2. the multiplication rule
Chapter 6

1. What’s a random variable?
   What’s a discrete random variable?
   What’s a continuous random variable?

2. what is a probability distribution"
   What are its properties?

3. the mean of a discrete r.v.

4. the s.d. of a discrete r.v.

5. how to determine whether a probability experiment is a binomial experiment(4 criteria)

6. binomial r.v.