Review common probability terminology:

- What is the sample space of a single dice? Of two dice?
- Give two examples of events given X dice.
- Given two random variables D1 and D2, describe a random variable for the sum of two dice.
- What is the expected value of D1 and D2? Of the sum of both?

Randomization in Algorithms

1. Assume input data is random to estimate average-case performance

Give an example of an average case analysis:

- Where is the source of randomness?
- What assumptions were made?

2. Use randomness inside algorithm to estimate expected running time

Give an example of an expected case analysis:

- Where is the source of randomness?
- What assumptions were made?
3. Using randomness inside algorithm to estimate expected accuracy

Give an example of an expected case accuracy:

What are the four outcomes in probabilistic accuracy?

Where is the source of randomness?

What assumptions were made?

What is the difference between a Las Vegas algorithm and a Monte Carlo algorithm?