

4.2 Theoretical Probability

A few terms...

- **simple event:** an event that consists of exactly one outcome (e.g., rolling a 3)
- **sample space:** the collection of all possible outcomes of an experiment (e.g., {1,2,3,4,5,6})
- **event space:** the collection of all outcomes of an experiment that correspond to a particular event (e.g. {2,4,6} are the even rolls of a die)

General Definition of T. Probability

- assuming that all outcomes are equally likely, the probability of event A is:

$$P(A) = \frac{n(A)}{n(S)}$$

- where $n(A)$ is the number of elements in the event space and $n(S)$ is the number of elements in the sample space.