STAT 107 – Fall 2020

Basic Probability

Ha Khanh Nguyen (hknguyen)

Basic Terminology

- Probability = likelihood

- Sample space

- Trial

- Event

Calculating Probability of Events

1. **Equally likely outcomes**
   - Trial: Roll a dice (fair 6-sided dice)

A = even outcome = {2, 4, 6}

B = outcome $\leq$ 2 = {1, 2}

- Trial: Flip and record the results of 2 coins. What is the probability of getting 2 Hs?

2. Non-equally likely outcomes & weighting

- Trial: Roll a loaded 6-sided dice where

Outcome	1	2	3	4	5	6
p	$\frac{3}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

A = even outcome

B = outcome ≤ 2

- Trial: Without looking inside, pick an item out a box containing: 1 pecan, 2 almonds, 3 cashews, and 5 peanuts. What is the probability of getting an almond at random?

To-do:

- Finish Lab 05, commit and push the lab using git commands!
- Get started with HW 4 on PL!

This lecture notes were adapted from "Course Notes for STAT 100: Statistics" by Kelly Findley & Ha Khanh Nguyen.