

STAT131 Week 1 Notes

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Winter 2022 Quarter

1 Introduction

This document covers essential information and example problems with answers in Chapter 1 in the "Introduction to Probability, 2nd Edition" written by Joseph K. Blitzstein and Jessica Hwang.

2 Important Definitions

Contains important definitions for understanding Chapter 1 in textbook.

- *Sample Space* S is the set of all possible outcomes from the experiment
- *Event* A is the subset of *sample space* S
 - **Note:** We say an event *occurred* if the actual outcome is in A .
- *Complement* of A are the elements not in A , denoted as

$$A^c$$

- *Union* of A and B occurs if *at least one* of A or B occurs

$$A \cup B$$

- *Intersect* of A and B occurs if only and if *both* of A and B occur

$$A \cap B$$