

Section 4.1: Intro to Probability

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12:05 PM

probability - used as a tool to evaluate the reliability of conclusions about a population based on a sample

used two ways -

if the population is known, use probability to give the likelihood of the next experimental outcomes

if the population is unknown, use probability to make statements about the population based on your sample

→ inferential statistics

experiment - process by which an observation (measurement) is obtained

simple event - the outcome observed on a single repetition of an experiment

examples:

roll a 6-sided die

outcomes: $E_1, E_2, E_3, E_4, E_5, E_6$

of just 1, 2, 3, 4, 5, 6

flip a coin

outcomes: E_T, E_H

T, H

event - a collection of simple events
- also known as a compound event

example: roll a 6-sided die again

event of "not rolling a 1" = $\{2, 3, 4, 5, 6\}$

"rolling an even number" = $\{2, 4, 6\}$