

Chapter 7.2
Monday, Week 6

Warmup

I roll two dice. What is the chance that the product of the two numbers is even?

There is a 50% chance of sun tomorrow and a 20% chance of crows. If these events are independent, what is the chance of sun and/or crows?

What is the chance of getting 3 heads and 2 tails in 5 flips of a fair coin?

Sampling With and Without Replacement

There are five boys and five girls, and I pick five of them at random for a team. What is the probability that I pick two boys and three girls?

What if I pick the team of five from fifty boys and fifty girls instead? (Find the percentage if you have a calculator.)

Bernoulli Trials

There is a coin that lands on heads with probability p . If I flip it three times, what is the probability that I get exactly two heads?

I have a coin that lands on heads 30% of the time. If I flip it 100 times, what is the most likely number of times it will land on heads?

Duels

Here is a fun game: Heads I win, tails we flip the coin again. What is the probability that I win?

Here is another game: We roll a fair die. 1, 2, 3 = I win, 4, 5 = you win, 6 = roll again. What is the chance that you win?