# Genome Building

Niraj Amalkanti, Bennett Ng

## Overview

Genome Building is similar to the game of blackjack. The game has two decks of cards: one of general organisms and one of viruses. Each organism has a certain number of chromosomes. The goal is to obtain cards totaling 50 chromosomes without going over.

The caveat is, each player has a certain number of virus cards, which may be used to adjust his or her chromosome count. Each virus has a base count. If a player chooses to play a virus card, the number of kilobases in that virus’s genome is *subtracted* from his/her chromosome total. For instance, if Bob has a set of cards totaling 53 chromosomes, he might play a virus card with a genome size of 3KB to reduce his total to 50 chromosomes.

The first player to reach 50 chromosomes wins the round. If both players exceed 50 chromosomes, then the round is a draw. The first player to win 3 rounds wins the game.

## Instructions

* The virus and genome decks are each shuffled.
* Each player draws 5 virus cards.
* Players alternate turns randomly drawing a genome card.
* The first player to 50 chromosomes wins.
* Virus cards may be played at any time, one per turn, and must be discarded after use.
* If a player exceeds 50 chromosomes, he/she must discard all genome cards and start over. The other player continues with their existing hand.
* If the genome cards are exhausted, all discarded genome cards are reshuffled and put back into play.