

COMBINATORICS 1 - SUMMER 2017 - ASSIGNMENT 1

- 1) How many distinct binary strings of length 16 are possible if the zeroes must appear in groups of even number?

- 2) Given three indistinguishable six-sided dice, how many distinct rolls of all three at once are possible?

- 3) How many two-pair hands are possible in 5 card draw poker with a standard 52 card deck?

- 4) How many straights (five cards with successive ranks, aces considered high) are possible? Count straight flushes and royal flushes as simple straights.

- 5) How many distinct ways can a Ford, Chevy, Toyota, and VW go thru three distinct toll booths? NB: Order of going thru matters.

- 6) A flag is to be designed with thirteen stripes, either red, white or blue, with the condition that no stripe is the same color as the one above it. How many flags are possible?