

ST102 Week 4

Fact: the cases with evenly-distributed probabilities:

$$P(A) = \frac{\#A}{\#all}$$

Important: compute by complement

$$P(A) = 1 - P(A^c)$$

Why bother? Maybe $P(A^c)$ easier to know

Comments. n people choosing $2n$ seats:

How to get the number $(n-1)$ in the above?

How do we make sure all cases are considered?

New approach: "space inserting"

Q1. Do we need ordering?

Yes & No, since cancelled in fractional

Q2. What is the bottom line?

XOXOX ... OX

\Downarrow
 $n * "X"$ & $(n-1) * "O"$

Q3. How to insert the last chair?

$n+1$ spaces to choose from