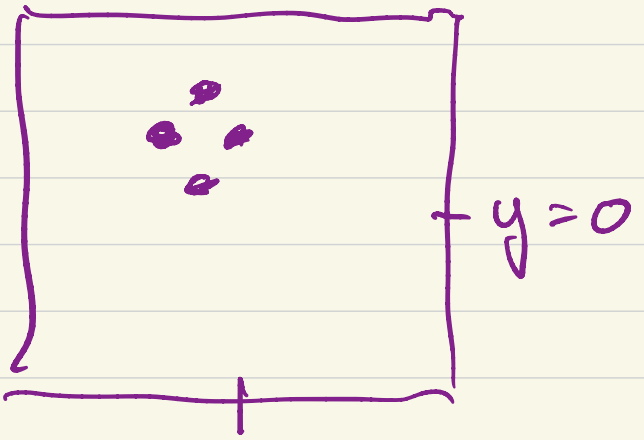
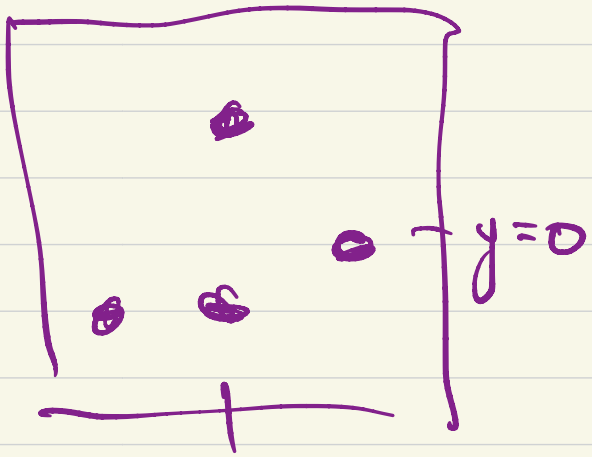
MMII

Feb 2nd, 2021

Day 1

Finite Sample Spaces

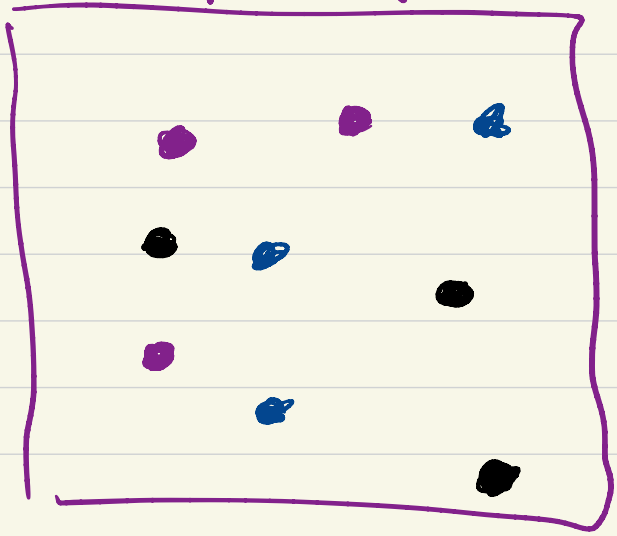




For the first part of the course we'll work with finite data sets.

# of data $\equiv N$

Sample Space



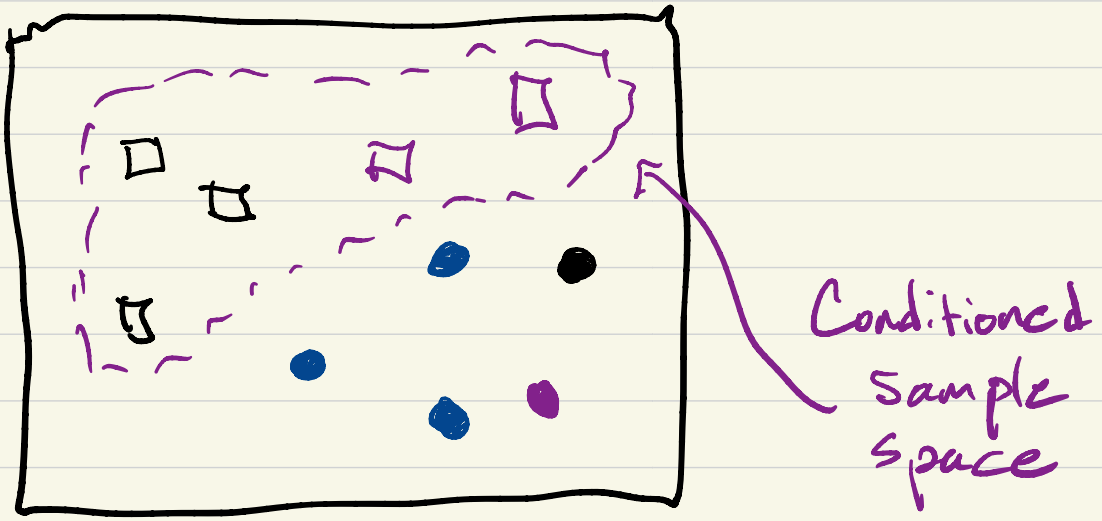
Ex.

$N = 9$

$P(\text{blue}) = \frac{N_b}{N}$

$= \frac{3}{9} = \frac{1}{3} = 33.\overline{3}\%$

A lot of complexity emerges when your sample space changes:



$$P(\text{black}) = \frac{2}{5} = \frac{4}{10} = 0.4$$

$$P(\text{black} \mid \text{square}) = \frac{3}{5}$$

↑ condition

The first task in any probability computation is to identify the sample space.