MON, JAN 27

* MIDTERM : FRI, MAR 6
  → IN CLASS

* HW #1 : TUES, FEB 4
  → GRADESCOPE BY 11:59 PM

* QUIZ #1 : WED, FEB 5
  → IN DISCUSSION SECTIONS
  → COVERS ALL OF §1.

GROUPS A DECK IS SHUFFLED.

P(TOP CARD IS KING SPADES

OR

BOTTOM CARD IS KING SPADES)

= ?

GROUPS 2 DECKS ARE SHUFFLED.

P(TOP OF 1st IS KS

OR

BOTTOM OF 2nd IS KS)

= ?

GROUPS SUPPOSE A, B WITH

$\mathbb{P}(A) = 0.5$, $\mathbb{P}(A \cup B) = 0.8$.

IS IT POSSIBLE THAT A, B

ARE INDEPENDENT AND

MUTUALLY EXCLUSIVE (DISJOINT) ?

GROUPS

$$\mathbb{P}(A) = \mathbb{P}(A \cup B) = 0.8.$$

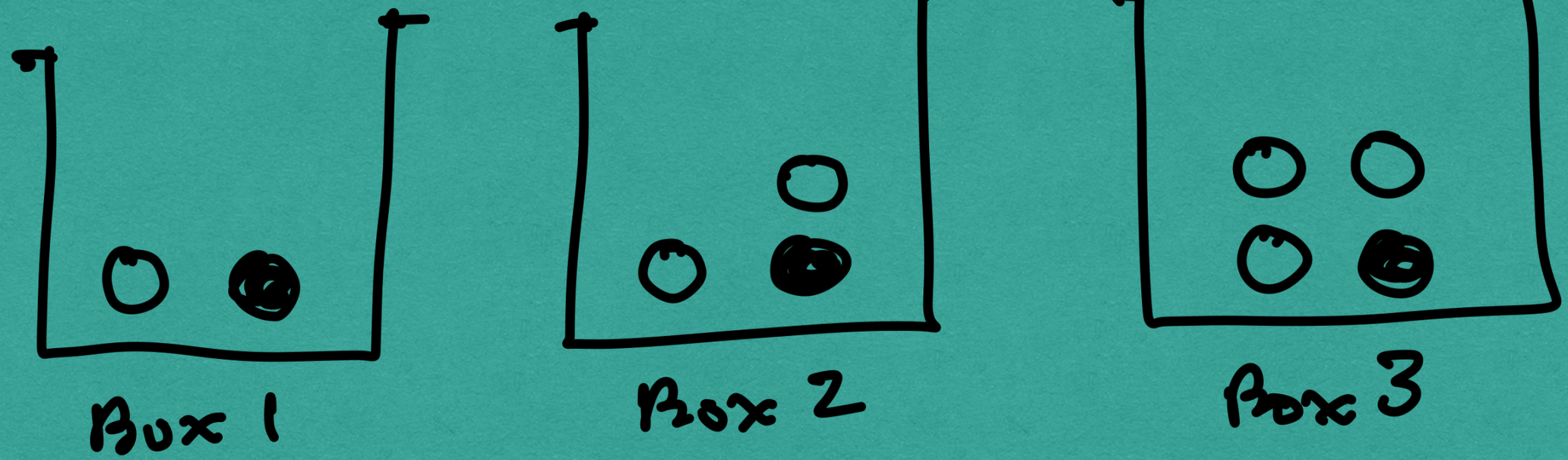
CAN A, B BE INDEPENDENT AND MUTUALLY EXCLUSIVE?

§1.5 BAYES' RULE

$$\mathbb{P}(A|B) = \frac{\mathbb{P}(B|A)\,\mathbb{P}(A)}{\mathbb{P}(B)}$$

GROUPS : WHY ?

GROUPS



* PICK A BOX AT RANDOM, AND THEN A BALL FROM THAT BOX RANDOMLY.

* SUPPOSE THAT IT IS WHITE. FIND THE PROB. THAT IT CAME FROM BOX 2.