1/13/20-1

OUTCOME

SAMPLE SPACE: {H, T}

DISCRETE

FINITE OR

INFINITE

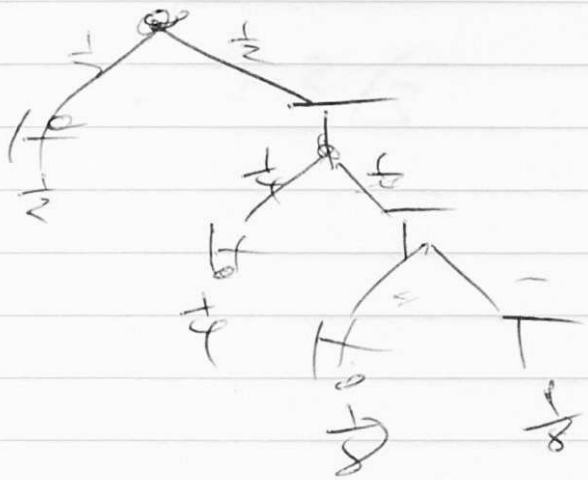
: TOSS COIN UNTIL GET H.

OUTCOME: # TOSSES TO

GET 1ST H.

SAMPLE: 1, 2, 3, ---, ∞

TREE



EVENT:

TOSS FAIR DIE

OUT SAMPLE SP: {1, 2, 3, 4, 5, 6}

OUTCOME = COMPOSITE = {4, 6}

$P[\text{COMPOS}] = \frac{1}{3}$

PROB

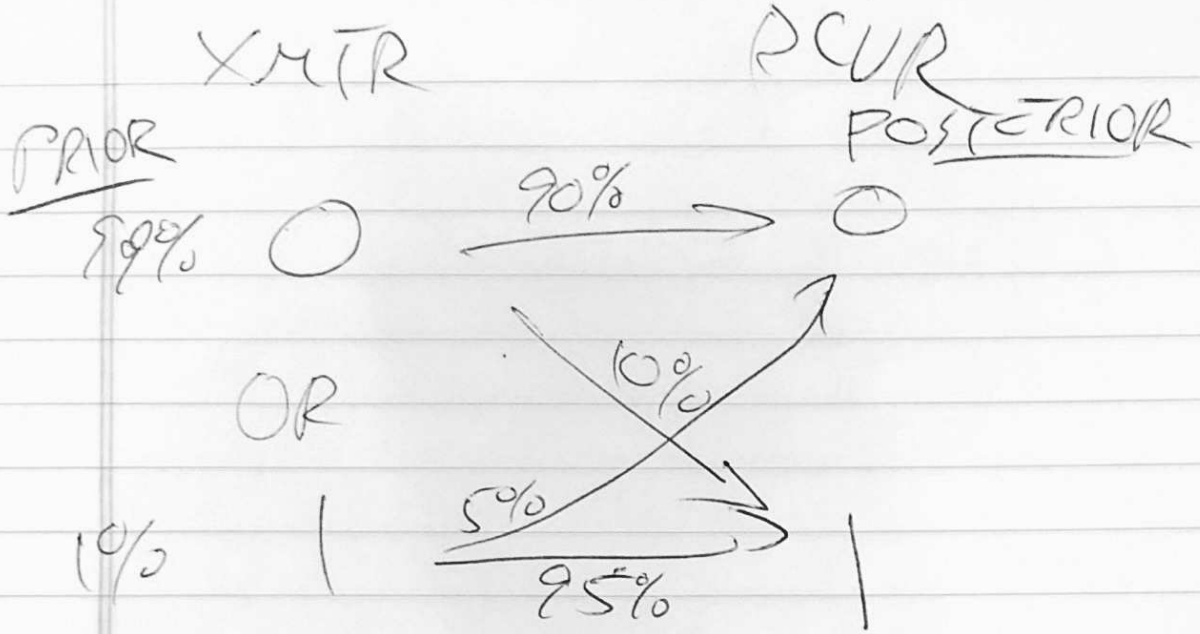
$P[1] = 1/6$

$P[\text{PRIME EX 1}] = \frac{1}{2}$

$\frac{1}{3} + \frac{1}{6} + \frac{1}{2} = 1$

EVENT THAT OUTCOME = 1 OR PRIME

$= \frac{1}{6} + \frac{1}{2} = 2/3$



NASTY CHANNEL

$P[RCV\ 1] = .99 \times .1 + .01 \times .9 = .1085$

$P[XMT\ 1 \mid RCV\ 1]$

↑ GIVEN THAT

$P[ERROR]$

USE ERROR CORRECTION

XMIT 3 TIMES + VOTE

$P[ERROR\ NOW]$