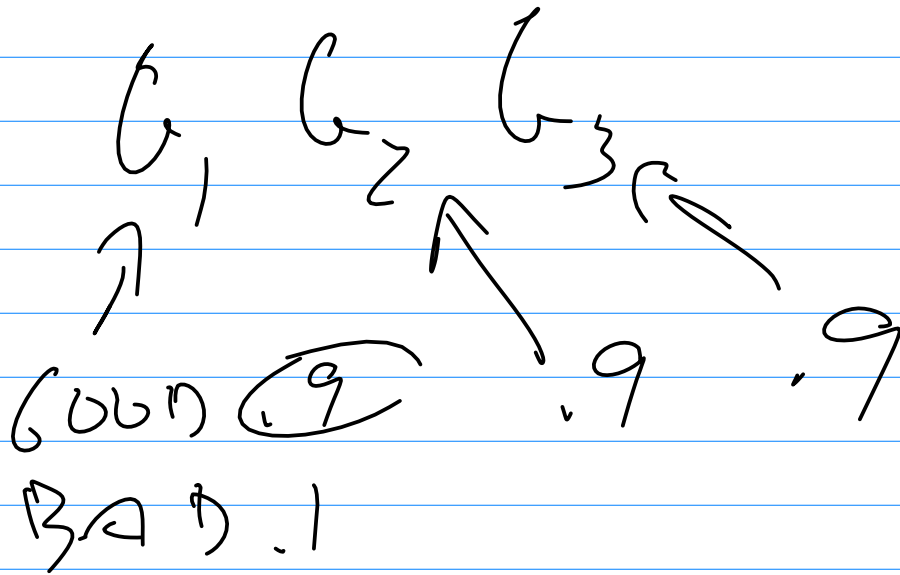


7.

~~1/25~~ 1/8



$$9^3 = 729$$

BITS DO NOT AFFECT EACH OTHER
INDEPENDENT

Q8

H/T

H/T

H/T

...

$$P(H) = \frac{1}{2}$$

$$P(H|H) = \frac{1}{2}$$

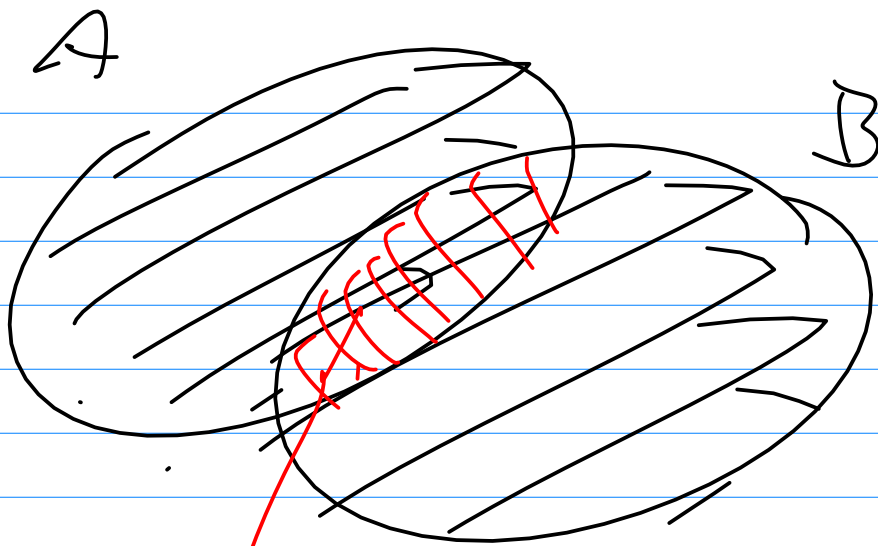
$$P(T|H) = \frac{1}{4}$$

$P(H)$ AFTER 1 TOSSES = $\frac{1}{4}$
- - - - 2 = $\frac{3}{4}$

3 = ~~1~~

L $P(\text{ALL TAILS IN 3 TOSSES})$

$$1 - \frac{1}{8} = \frac{7}{8}$$



$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

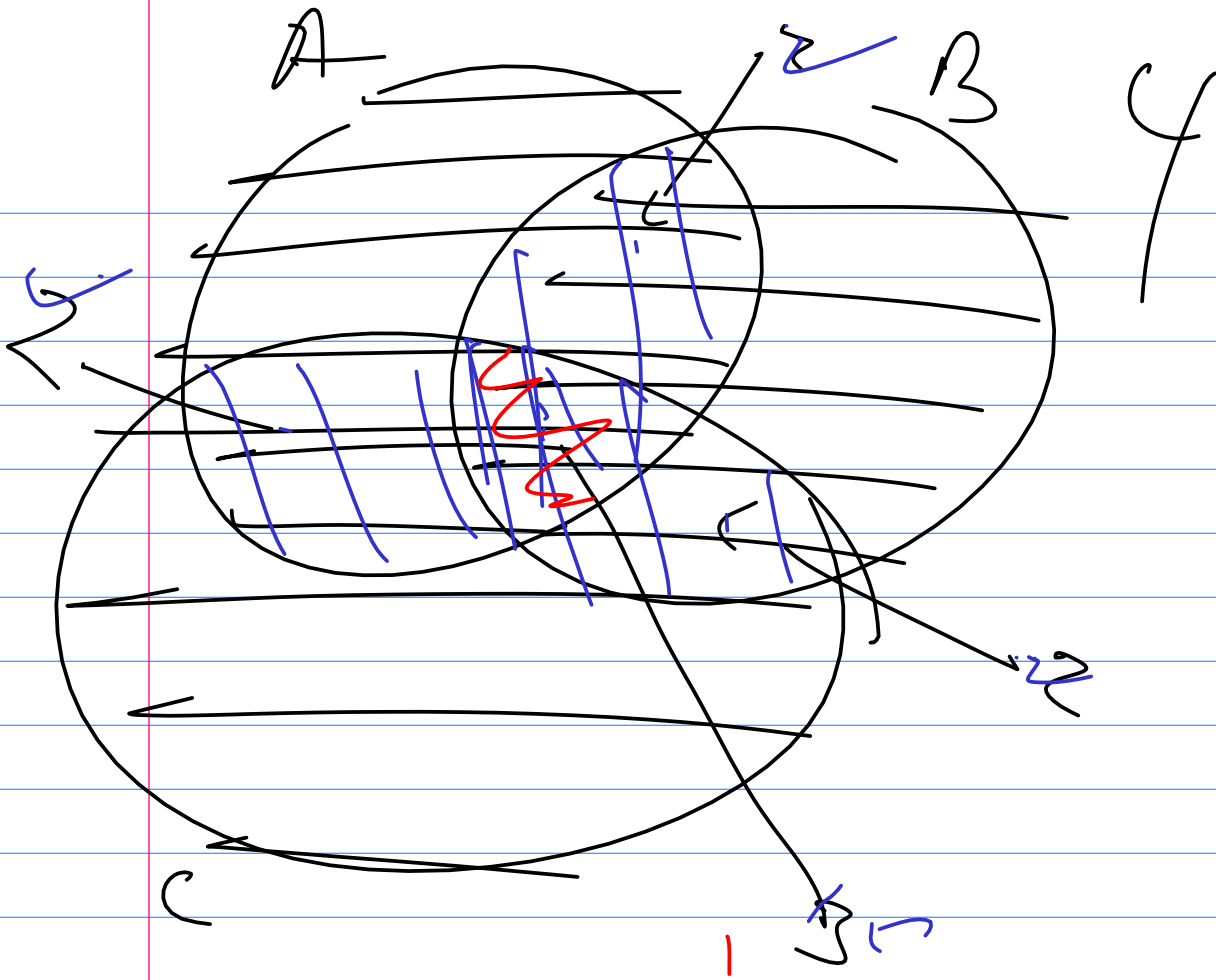
$$2a \quad P(Q \cap F) = 4/52$$

$$P(H \cap F) = 3/52$$

$$P(Q \cap H \cap F) = 1/52$$

$$P(Q \cup H \cup F) = \frac{4 + 3 + 1 - 1 - 4 - 3 + 1}{52}$$

$$= 22/52$$



$$\sum_{i < j} \equiv \sum_{i=1}^{n-1} \sum_{j=i+1}^n$$

$$\sum_{i < j < k} \equiv \sum_{i=1}^{n-2} \sum_{j=i+1}^{n-1} \sum_{k=j+1}^n$$

EXPT

5

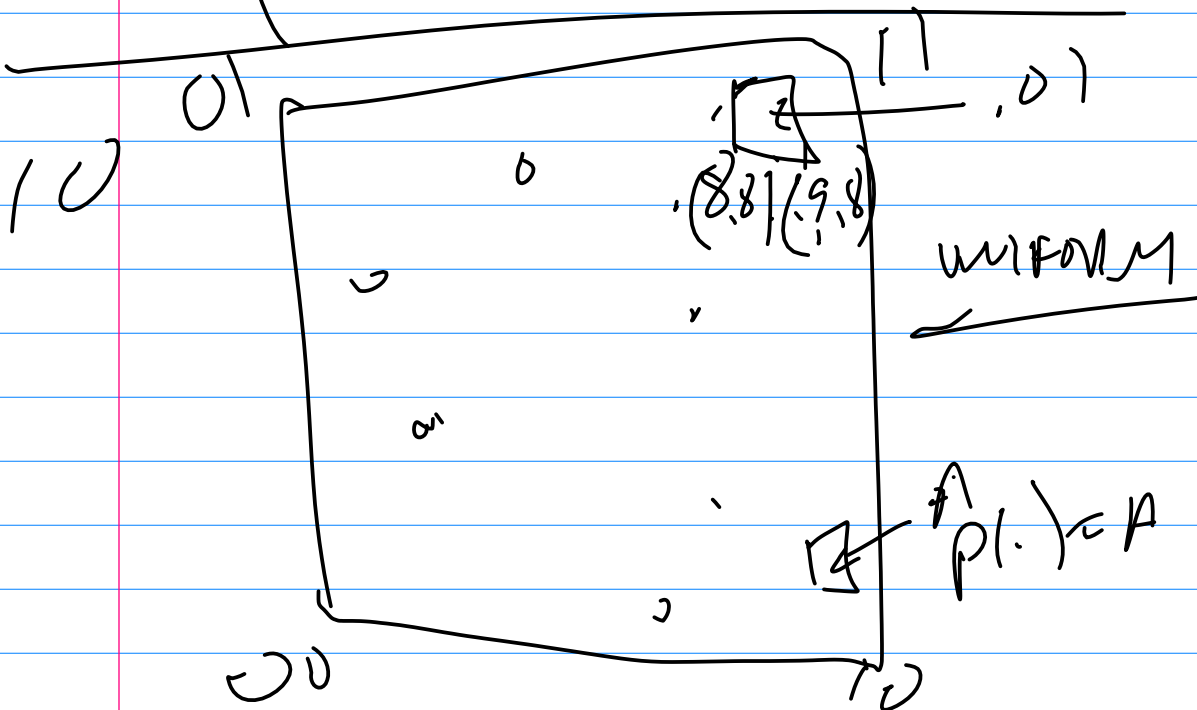
TOSS COIN 2 TIMES

CHOOSE THAT OUTCOMES
ARE \neq HEADS

3 POSSIBLE:

0 HEADS	$\frac{1}{4}$
1 " "	$\frac{2}{4}$
2 " "	$\frac{1}{4}$

PROB?



6

