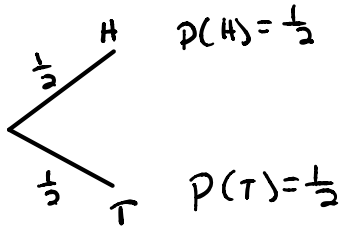
Tree Diagram

$0 \le P(\text{event}) \le 1$

Notes Section P.2

Coinage 1
You flip a coin.

Day 2: List the sample space and probabilities of each outcome.

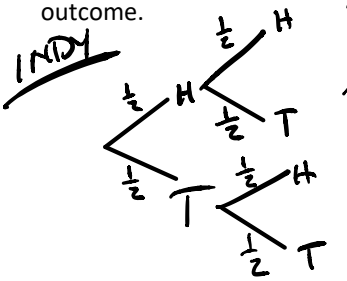


Coinage 2
You flip a coin twice.

INDY vs Dependent

Day 2: List the sample space and probabilities of each outcome.

INDY



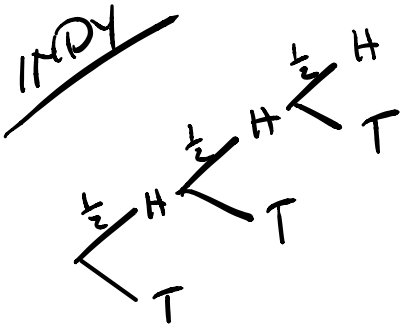
P(AT Least 1 HEAD) = $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}=\frac{3}{4}$

P(TT) = $\frac{1}{4}$

Coinage 3
You flip a coin thrice.

Day 2: ~~List the sample space~~ and probabilities of each outcome.

INDY



$P(\ge 1 \text{ tail}^c)$

$P(\ge 1 \text{ tail}) = 1 - P(H,H,H)$

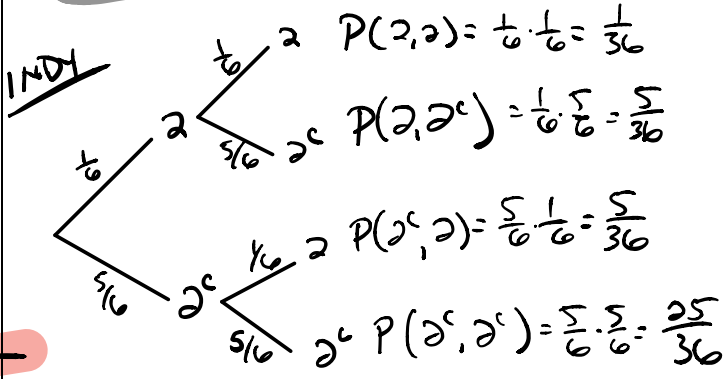
$= \frac{8}{8} - \frac{1}{8}$

$= \frac{7}{8}$

Roll That Die
Deuce is obsessed with 2s. He's so obsessed that he rolls a die 2 times. If Deuce is only concerned with getting a 2 on each die, list the sample space of getting and not getting 2s. Find the probability of each outcome.

2^c

INDY



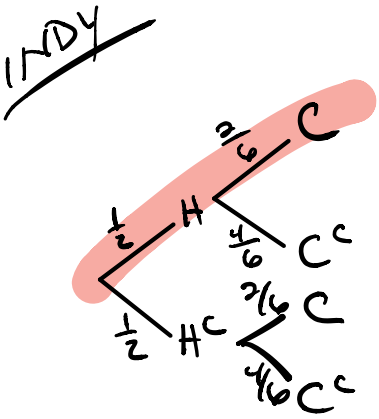
$P(2 \mid 2) = \frac{1}{6}$

$P(2^c \mid 2) = \frac{5}{6}$

Flip a coin save the die
Flip a coin and roll a die. What is the probability that you flipped a head and rolled a composite number?

$\{4, 6\}$

INDY



$P(C \mid H) = \frac{2}{6}$

$P(C \mid H^c) = \frac{2}{6}$