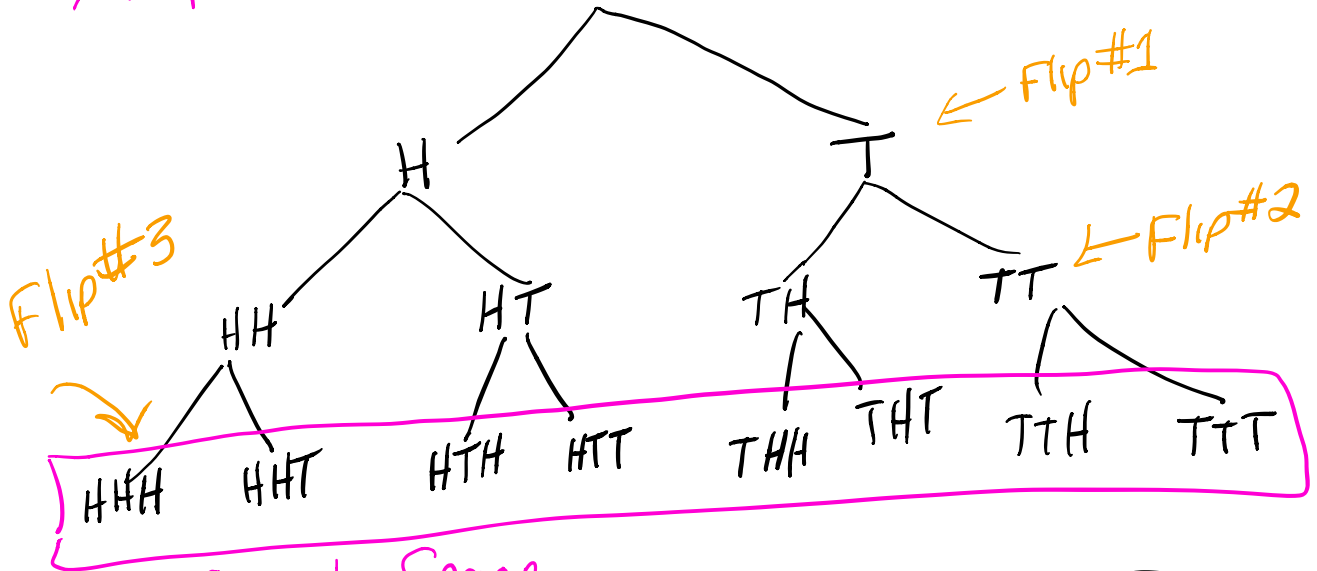


4) Flip a coin 3 times



Sample Space

a) $S = \{ \underline{HHH}, \underline{HHT}, \underline{HTH}, \underline{HTT}, \underline{THH}, \underline{THT}, \underline{TTH}, \underline{TTT} \}$

8 outcomes possible in the sample space

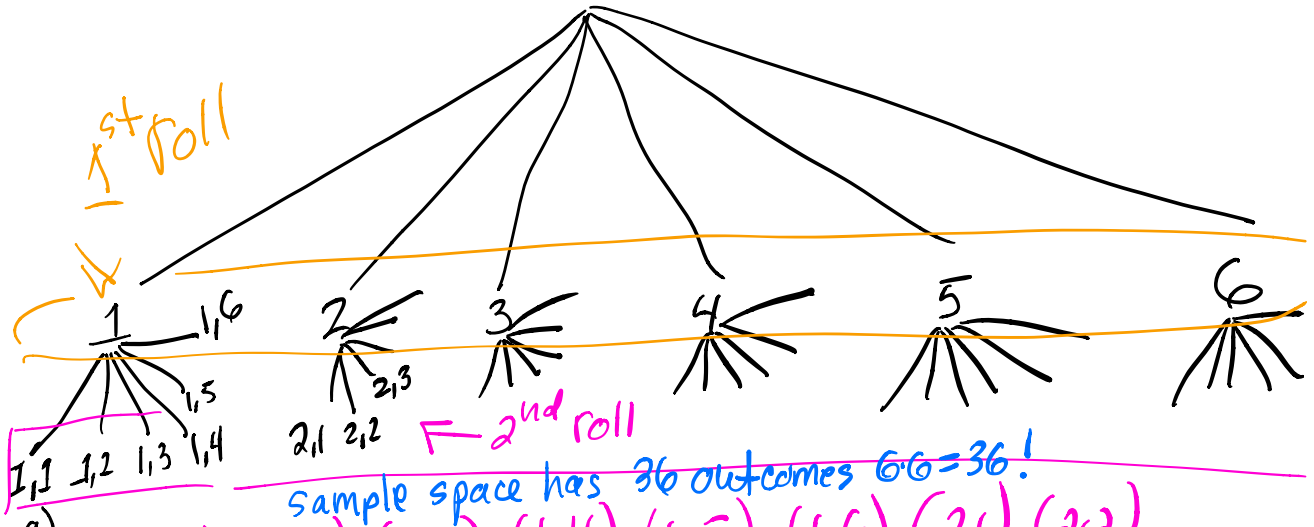
$$\underbrace{2}_{\text{Flip\#1}} \cdot \underbrace{2}_{\text{Flip\#2}} \cdot \underbrace{2}_{\text{Flip\#3}} = 2^3 = 8 \text{ possible outcomes}$$

b) What is the event that tails occurs more often than heads?

$$E = \{ \underline{HTT}, \underline{THT}, \underline{TTH}, \underline{TTT} \}$$

5) Draw the tree diagram:

Roll 2 dice



a)

$$S = \{ (1,1), (1,2), (1,3), (1,4), (1,5), (1,6), (2,1), (2,2), (2,3), (2,4), (2,5), (2,6), (3,1), \dots, (6,5), (6,6) \}$$

b) Determine the event that produces a sum of 7

$$E_1 = \{ (1,6), (2,5), (3,4), (4,3), (5,2), (6,1) \}$$

6 outcomes

c) Roll same #!

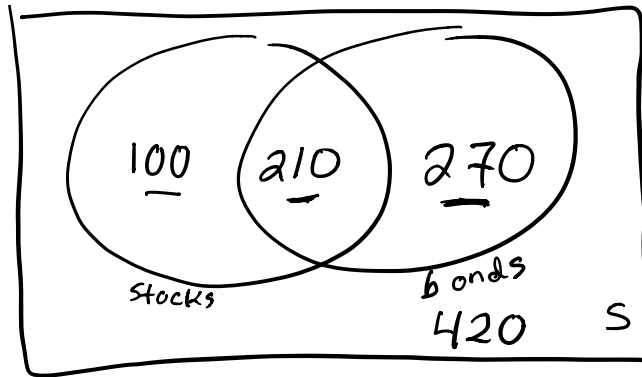
$$E_2 = \{ (1,1), (2,2), (3,3), (4,4), (5,5), (6,6) \}$$

↑ snake eyes!

- Stock ex. 1,000 total people
- 310 invest in stocks
 - 480 bonds
 - 210 stocks + bonds

480 bonds
 - 210 both

 270 only
 bonds



310 stocks
 - 210 both

 100 stocks
 only

100
 210
 270

 580

How many don't invest in
 any thing?

$$1000 - 580 = 420$$

a) stocks or bonds $\rightarrow A \cup B =$

$$100 + 210 + 270 = 580$$



b) neither?
 420



c) bonds but not stocks
 270

