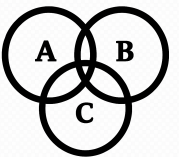
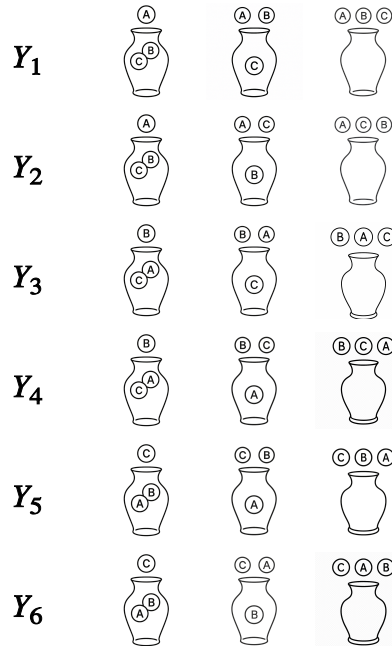
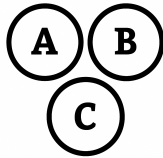


G

Counting

G



$$N = \{A, B, C\}$$

$$Y = \text{⊞}(N, 3)$$

$$|Y| = |N| \times (|N|-1) \times (|N|-2)$$

$$|Y| = 3 \times 2 \times 1 = 6$$

$$M = \{T, H\}$$

$$X = \text{⊞}(M, 3)$$

$$|X| = |M| \times |M| \times |M|$$

$$|X| = 2 \times 2 \times 2 = 8$$

?

$$S = \{T, H\}$$

$$|\text{⊞}(S, X)| = ?$$

G

Counting

G



$$S = \{T, H\}$$

$$|\textcircled{S,1}| = |S| = 2$$

$$|\textcircled{S,2}| = |S| \times |S| = 2 \times 2 = 4$$

$$|\textcircled{S,3}| = |S| \times |S| \times |S| = 2 \times 2 \times 2 = 8$$

$$|\textcircled{S,4}| = |S| \times |S| \times |S| \times |S| = 2 \times 2 \times 2 \times 2 = 16$$

$$|\textcircled{S,X}| = |\mathcal{P}(S)| = |S|^X = 2^X$$