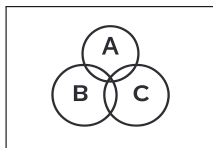
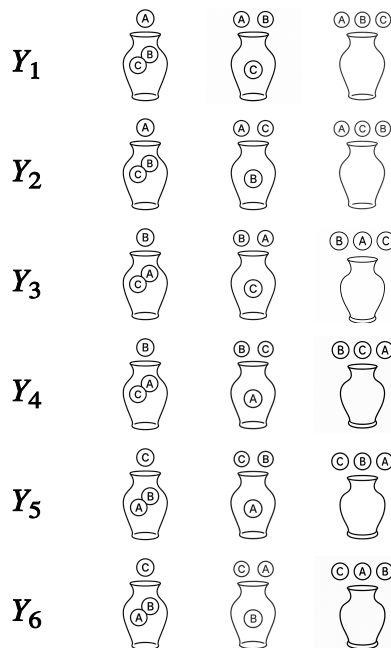
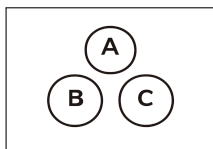


3

Discrete Distribution Counting



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

$$Y = \textcircled{\equiv}(N, 3)$$

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

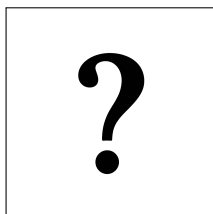
$$|Y| = 3 \times 2 \times 1 = 6$$

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

$$X = \textcircled{\equiv}(M, 3)$$

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

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

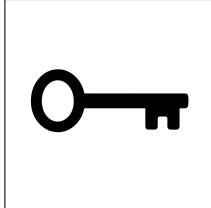


$$S = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$$

$$|\textcircled{\equiv}(S, 4)| = ?$$

3

Discrete Distribution Counting



$S = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$|\mathcal{P}_3(S, 4)| = |S| \times (|S|-1) \times (|S|-2) \times (|S|-3) = 10 \times 9 \times 8 \times 7 = 5,040$