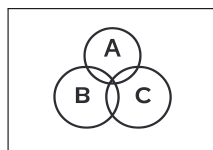
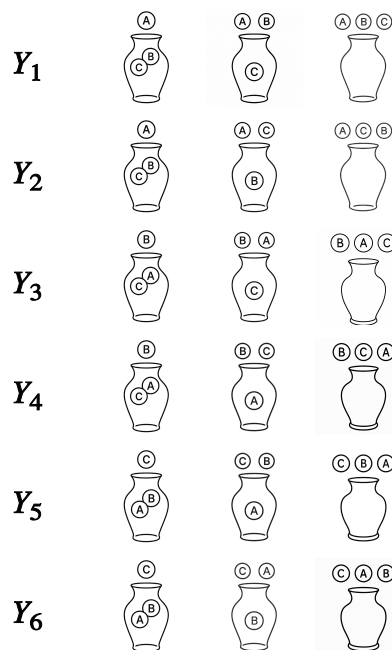
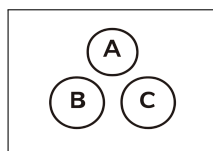


4

Discrete Distribution Permutations

C



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

$$|Y| = \sum_{k=0}^n rP_k = \frac{r!}{(r-k)!}$$

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

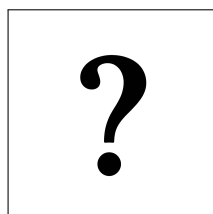
$$|Y| = 3 \times 2 \times 1 = 6$$

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

$$|X| = \sum_{k=0}^n |M|^k$$

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

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



$$S = \{1, 2, 3, 4, \dots, 40\}$$

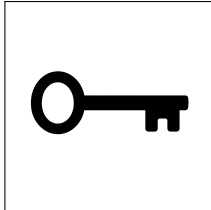
$$X = \sum_{k=0}^n (S, 3)$$

$$|X| = ?$$

4

Discrete Distribution Permutations

C



$$S = \{1, 2, 3, 4, \dots, 40\}$$

$$X = \bigoplus_{i=1}^3 (S, 3)$$

$$|X| = |S| \times |S| \times |S|$$

$$|X| = 40 \times 40 \times 40 = 64,000$$