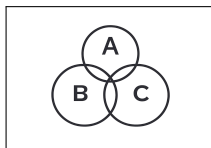
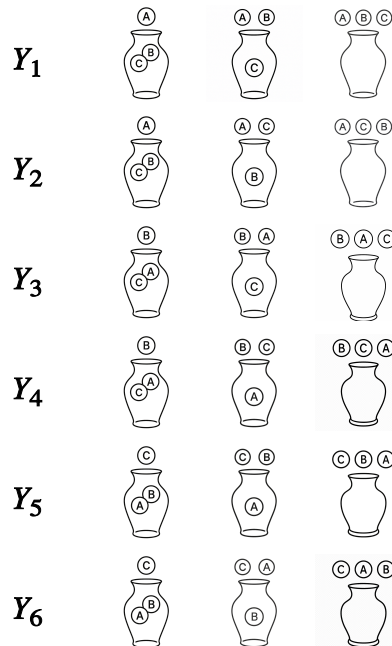
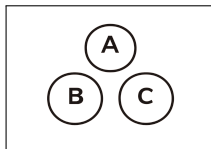


4

Discrete Distribution Permutations

J



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

$$|Y| = \text{⊖} = rP_k = \frac{r!}{(r-k)!}$$

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

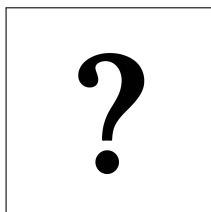
$$|Y| = 3 \times 2 \times 1 = 6$$

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

$$|X| = \text{⊖} = |M|^3$$

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

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



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

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

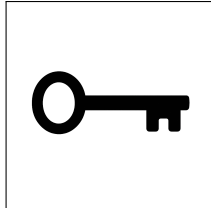
$$X = \text{⊖}(N, 1) : Y = \text{⊖}(M, 4)$$

$$|Z| = |X| \times |Y| = ?$$

4

Discrete Distribution
Permutations

J



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

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

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

$$Y = \bigoplus_{i=1}^M (M, 4)$$

$$|Z| = |X| \times |Y| = |N| \times |M|^4 = 9 \times 10 \times 10 \times 10 \times 10 = 90,000$$