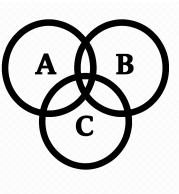
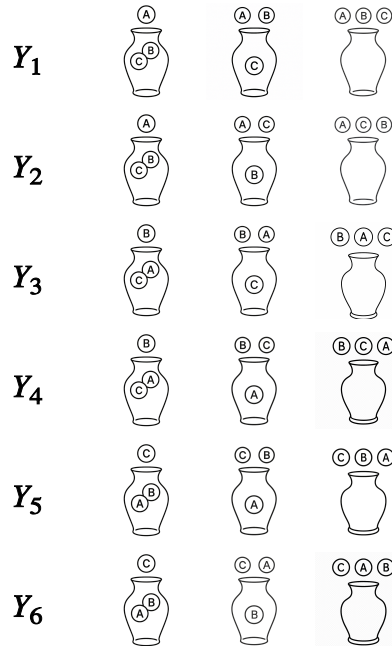
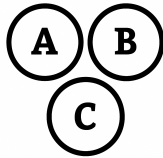


# B

## Permutations

# B



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

$$|Y| = \sum_{k=1}^3 rP_k = \frac{r!}{(r-k)!}$$

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

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

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

$$|X| = \sum_{k=1}^3 |M|^k$$

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

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

?

$$N = \{1, 2, 3, \dots, 26\}$$

$$X = \sum_{k=1}^3 (S, k)$$

$$|X| = ?$$

# B

## Permutations

# B



$$N = \{1, 2, 3, \dots, 26\}$$

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

$$|X| = rPk = |N|! / (|N| - 3)!$$

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

$$|X| = 26 \times 25 \times 24 = 15,600,000$$