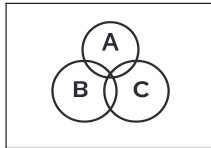
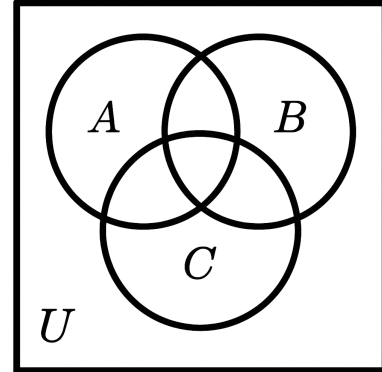
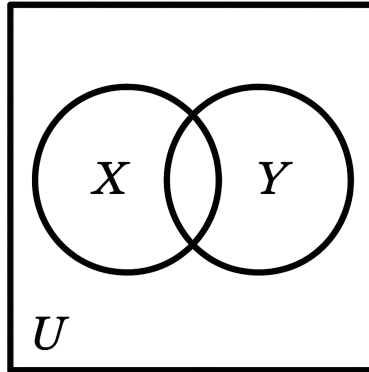
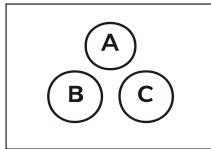


2

Discrete Distribution Set Operations



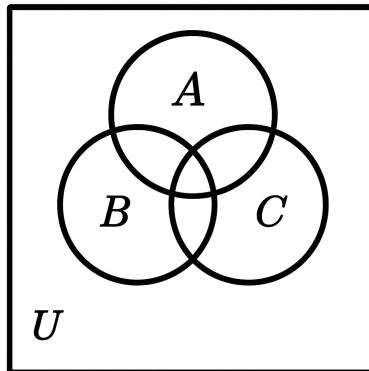
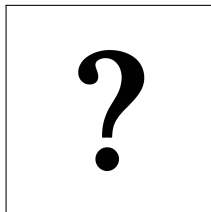
$$|X \cup Y| = |X| + |Y| - |X \cap Y| = |U| - |X^c \cap Y^c|$$

$$|X \cap Y| = |X| + |Y| - |X \cup Y| = |U| - |X^c \cup Y^c|$$

$$|A \cup B \cup C| = |A| + |B| + |C| - |A \cap B| - |B \cap C| - |A \cap C| + |A \cap B \cap C|$$

$$|A \cap B \cap C| = -|A| - |B| - |C| + |A \cup B| + |B \cup C| + |A \cup C| + |A \cup B \cup C|$$

$$|A \cap B| = |A \cap B \cap C^c| + |A \cap B \cap C|$$



$$|A| = 63$$

$$|B| = 91$$

$$|C| = 44$$

$$|A \cap B| = 25$$

$$|B \cap C| = 21$$

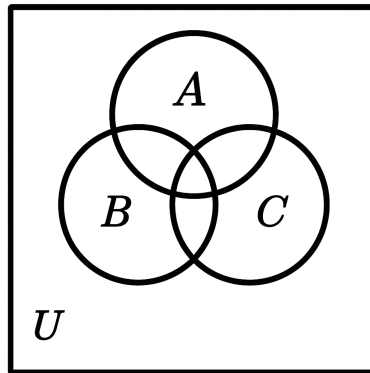
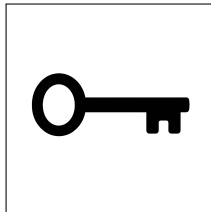
$$|A \cap C| = 23$$

$$|A \cup B \cup C| = 139$$

$$|A \cap B \cap C| = ?$$

2

Discrete Distribution Set Operations



$$|A| = 63$$

$$|B| = 91$$

$$|C| = 44$$

$$|A \cap B| = 25$$

$$|B \cap C| = 21$$

$$|A \cap C| = 23$$

$$|A \cup B \cup C| = 139$$

$$|A \cap B \cap C| = ?$$

$$|A \cap B \cap C| = -|A| - |B| - |C| + |A \cup B| + |B \cup C| + |A \cup C| + |A \cup B \cup C|$$

$$|A \cap B \cap C| = -63 - 91 - 44 + 25 + 21 + 23 + 139 = 10$$