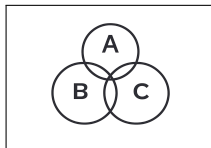
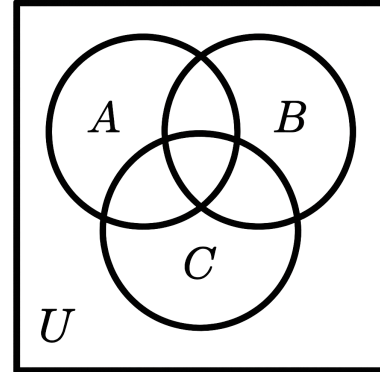
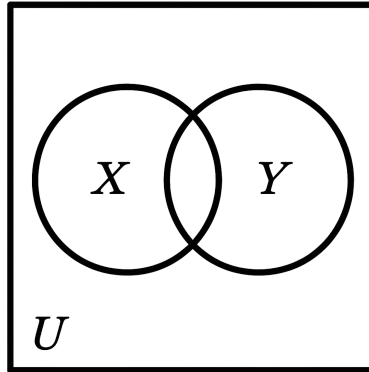
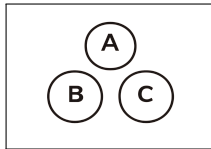


2

Discrete Distribution Set Operations

J



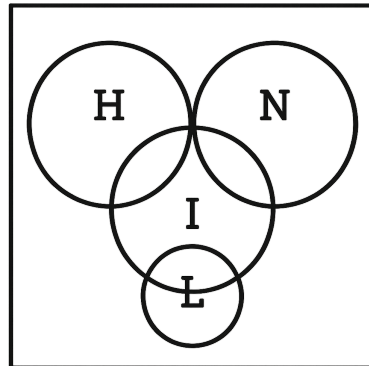
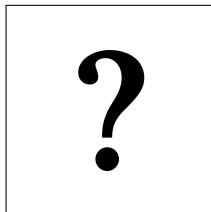
$$|X \cup Y| = |X| + |Y| - |X \cap Y| = |U| - |X^C \cap Y^C|$$

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

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

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

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



$$H = 14$$

$$L = 22$$

$$N = 64$$

$$I = 15$$

$$H \cap I = 5$$

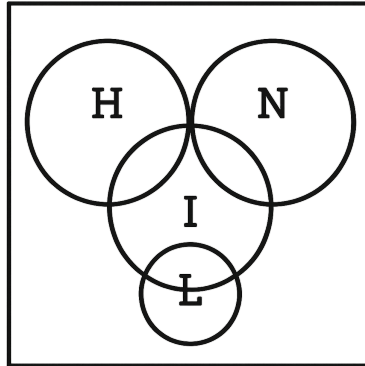
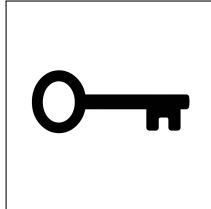
$$|N \cap I| = 8$$

$$|L \cap I| = ?$$

2

Discrete Distribution
Set Operations

J



$$H = 14$$

$$L = 22$$

$$N = 64$$

$$I = 15$$

$$H \cap I = 5$$

$$|N \cap I| = 8$$

$$|L \cap I| = ?$$

$$|I| = |H \cap I| + |L \cap I| + |N \cap I|$$

$$|L \cap I| = |I| - |H \cap I| - |N \cap I|$$

$$|L \cap I| = 15 - 5 - 8 = 2$$

$$|L| = |L \cap I| + |L \cap I^C|$$

$$|L \cap I^C| = |L| - |L \cap I|$$

$$|L \cap I^C| = 22 - 2 = 20$$