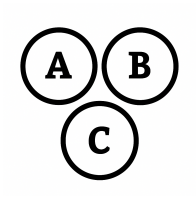
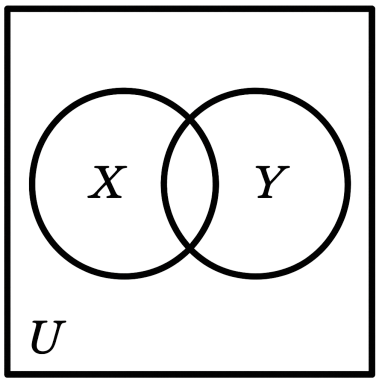
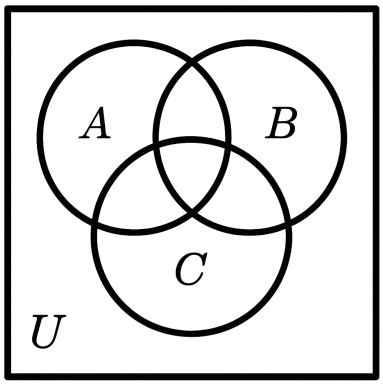
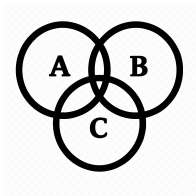
Set Operations









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

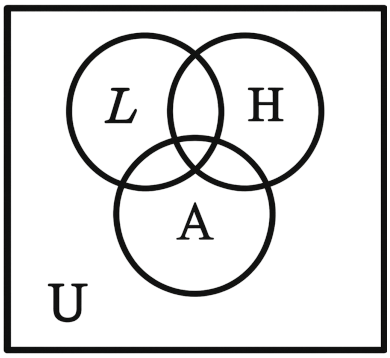
$|X \cap Y| = |X| + |Y| - |X \cup Y| = |U| - |X^C \cup Y^C|$

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

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

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

?



$|L| = 55$

$|A| = 60$

$|H| = 30$

$|U| = |L \cup A \cup H| = 100$

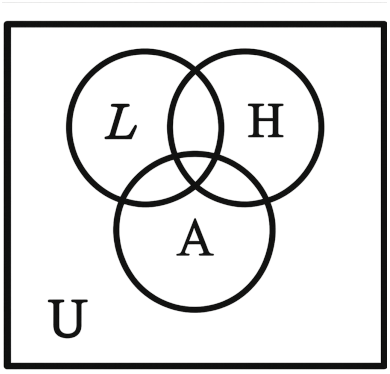
$|L \cap A| = 25$

$|L \cap H| = 15$

$|A \cap H| = 15$

$|L \cap A \cap H| = ?$

Set Operations



$|L| = 55$
$|A| = 60$
$|H| = 30$
$|U| = |L \cup A \cup H| = 100$
$|L \cap A| = 25$
$|L \cap H| = 15$
$|A \cap H| = 15$
$|L \cap A \cap H| = ?$

$|L \cap A \cap H| = -|L| - |A| - |H| + |L \cap A| + |L \cap H| + |A \cap H| + |L \cup A \cup H|$
$|L \cap A \cap H| = -55 - 60 - 30 + 25 + 15 + 15 + 100 = 10$