CS 278 Lab 8

3.4.2 (b) The elements of $A \oplus B \oplus C$ are the elements of each set that are not in the other sets. $A \oplus B \oplus C = ((A-B) \cup (B-A) - C) \cup (C - (A-B) \cup (B-A))$

(c) The elements in $A_1 \oplus A_2 \oplus \ldots \oplus A_n$

$A_1 \oplus A_2 = (A_1 - A_2) \cup (A_2 - A_1) = X_1$

$A_1 \oplus A_2 \oplus A_3 = (X_1 - A_3) \cup (A_3 - X_1) = X_2$

$A_1 \oplus A_2 \oplus A_3 \oplus A_4 = (X_2 - A_4) \cup (A_4 - X_2) = X_3$

$A_1 \oplus A_2 \oplus \ldots \oplus A_n = \boxed{(X_{n-2} - A_n) \cup (A_n - X_{n-2})}$

3.4.3 (b) $|A \cap B| = |A \cap C|$

$2 = 1$

false

(e) $B \cup C = \{3, 5\}$

false

(f) $2 \in A \cup C$

true

(h) $\{3\} \in P(C)$

true

(i) $\emptyset \in A$

false

3.4.4 (c) $G \subseteq H$

true

(d) $|C - F| = 1$

true

(f) $1 \in A \cap B \cap C$

false

(i) $C \cap F = C \cap G$

true

(j) $E \cup F \subseteq R$

true

3.4.5 (d) $A \oplus A \oplus A$

$= \emptyset$

(e) $A \oplus (A \oplus B) = (A \oplus A) \oplus B$

$A \oplus A = \emptyset$

$\emptyset \oplus B$

$= \boxed{B}$