

1. (a) $A \cup B = \{1, 3, 4, 5, 6, 7, 9\}$
- (b) $A \cap B = \{5, 9\}$
- (c) $A \setminus B = \{7\}$
- (d) $B \setminus A = \{1, 3, 4, 6\}$
- (e) $A \cup B \cup C = \{1, 3, 4, 5, 6, 7, 9\}$
- (f) $A \cap B \cap C = \{9\}$
- (g) $A \cap (B \cup C) = \{5, 7, 9\}$
- (h) $A \cup (B \cap C) = \{3, 4, 5, 7, 9\}$
- (i) $A \setminus (B \cap C) = \{5, 7\}$
- (j) $|B| = 6$
- (k) $|A \cap C| = 2$
- (l) $|(B \setminus C) \cup (C \setminus B)| = 4$
- (m) $|C \cap (A \setminus C)| = 0$

2. (a) $A \cup B = \{1, 2, 3, 4, 5, 7\}$
(b) $A \cap B = \{1, 2, 7\}$
(c) $A \setminus B = \{3\}$
(d) $B \setminus A = \{4, 5\}$
(e) $A \cup B \cup C = \{1, 2, 3, 4, 5, 6, 7, 8\}$
(f) $A \cap B \cap C = \{1\}$
(g) $A \cap (B \cup C) = \{1, 2, 3, 7\}$
(h) $A \cup (B \cap C) = \{1, 2, 3, 7\}$
(i) $A \setminus (B \cap C) = \{2, 3, 7\}$
(j) $|B| = 5$
(k) $|A \cap C| = 2$
(l) $|(B \setminus C) \cup (C \setminus B)| = 7$
(m) $|C \cap (A \setminus C)| = 0$