$A = \{1,2,3,4,5\}$ $B = \{2,4,6,8\}$ $C = \{7,3,2,1\}$

1) $A \setminus (B \cup C) = (A \setminus B) \cap (A \setminus C)$

$\{1,2,3,4,5\} \setminus \{1,2,3,4,6,7,8\} = \{1,3,5\} \cap \{4,5\}$
$\{5\} = \{5\}$

2) $A \setminus (B \cap C) = (A \setminus B) \cup (A \setminus C)$

$\{1,2,3,4,5\} \setminus \{2\} = \{1,3,5\} \cup \{4,5\}$
$\{1,3,4,5\} = \{1,3,4,5\}$

3) $A \setminus (A \setminus B) = A \cap B$

$\{1,2,3,4,5\} \setminus \{1,3,5\} = \{2,4\}$
$\{2,4\} = \{2,4\}$

4) $A \setminus B = A \setminus (A \cap B)$

$\{1,3,5\} = \{1,2,3,4,5\} \setminus \{2,4\}$
$\{1,3,5\} = \{1,3,5\}$

5) $A \cap (B \setminus C) = (A \cap B) \setminus (A \cap C)$

$\{1,2,3,4,5\} \cap \{4,6,8\} = \{2,4\} \setminus \{1,2,3\}$
$\{4\} = \{4\}$

6) $(A \cap B) \setminus (A \cap C) = (A \cap B) \setminus C$

$\{2,4\} \setminus \{1,2,3\} = \{2,4\} \setminus \{1,2,3,7\}$
$\{4\} = \{4\}$

7) $A \cap (B \setminus C) = (A \cap B) \setminus C$

$\{1,2,3,4,5\} \cap \{4,6,8\} = \{2,4\} \setminus \{1,2,3,7\}$
$\{4\} = \{4\}$

8) $(A \setminus B) \setminus C = (A \setminus C) \setminus (B \setminus C)$

$\{1,3,5\} \setminus \{1,2,3,7\} = \{4,5\} \setminus \{4,6,8\}$
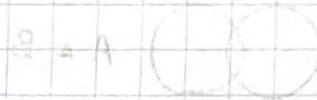$\{5\} = \{5\}$

9) $A \cup B = A \cup (B \setminus A)$

$\{1,2,3,4,5,6,8\} = \{1,2,3,4,5\} \cup \{6,8\}$
$\{1,2,3,4,5,6,8\} = \{1,2,3,4,5,6,8\}$

10) $(A \cap B) \cup (A \cap \bar{B}) = A$

$\{2,4\} \cup \{1,2,3,4,5\} \cap \{1,3,5,7\} = \{1,2,3,4,5\}$
$\{2,4\} \cup \{1,3,5\} = \{1,2,3,4,5\}$
$\{1,2,3,4,5\} = \{1,2,3,4,5\}$

11) $(A \cup B) \cap (A \cup \bar{B}) = A$

$\{1,2,3,4,5,6,8\} \cap \{1,2,3,4,5,7\} = \{1,2,3,4,5\}$
$\{1,2,3,4,5\} = \{1,2,3,4,5\}$

12) $(\bar{A} \cup B) \cap A = A \cap B$

$\{2,4,6,8,7\} \cap \{1,2,3,4,5\} = \{2,4\}$
$\{2,4\} \cap \{2,4\}$

13) $(A \cup B) \setminus C = (A \setminus C) \cup (B \setminus C)$

$\{1,2,3,4,5,6,8\} \setminus \{1,2,3,7\} = \{4,5\} \cup \{4,6,8\}$
$\{4,5,6,8\} = \{4,5,6,8\}$

14) $A \setminus (B \setminus C) = (A \setminus B) \cup (A \cap C)$

$\{1,2,3,4,5\} \setminus \{4,6,8\} = \{1,3,5\} \cup \{1,2,3\}$
$\{1,2,3,5\} = \{1,2,3,5\}$