

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

$$B = \{2, 4, 6, 8\}$$

$$C = \{7, 3, 2, 1\}$$

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

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

$$\{5\} = \{5\}$$

верно

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

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

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

верно

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

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

$$\{2, 4\} = \{2, 4\}$$

верно

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

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

$$\{1, 3, 5\} = \{1, 3, 5\}$$

верно



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

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

$$\{4\} = \{4\}$$

верно

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

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

$$\{4\} = \{4\}$$

верно

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

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

$$\{4\} = \{4\}$$

верно

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

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

$$\{5\} = \{5\}$$

$$\{5\} = \{5\}$$

верно



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

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

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

верно

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

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

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

$$A = A \quad \text{верно}$$

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

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

$$A = A \quad \text{верно}$$

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

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

$$\{2, 4, 6, 8\} \cap A = \{2, 4\}$$

$$\{2, 4\} = \{2, 4\} \quad \text{верно}$$