

43 № Муменико Елена К3220

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

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

1)  $(B \cup C) = \{1, 2, 3, 4, 6, 7, 8\}$   
 $A \setminus (B \cup C) = \underline{\{5\}}$

2)  $(A \setminus B) = \{1, 3, 5\}$        $(A \setminus C) = \{4, 5\}$   
 $(A \setminus B) \cap (A \setminus C) = \underline{\{5\}}$

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

1)  $(B \cap C) = \{2\}$        $A \setminus (B \cap C) = \underline{\{1, 3, 4, 5\}}$

2)  $(A \setminus B) = \{1, 3, 5\}$        $(A \setminus C) = \{4, 5\}$

$(A \setminus B) \cup (A \setminus C) = \underline{\{1, 3, 4, 5\}}$

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

1)  $A \setminus B = \{1, 3, 5\}$

$A \setminus (A \setminus B) = \underline{\{2, 4\}}$

2)  $A \cap B = \underline{\{2, 4\}}$

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

1)  $A \setminus B = \underline{\{1, 3, 5\}}$

2)  $A \cap B = \{2, 4\}$        $A \setminus (A \cap B) = \underline{\{1, 3, 5\}}$

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

1)  $B \setminus C = \{4, 6, 8\}$        $A \cap (B \setminus C) = \underline{\{4\}}$

2)  $A \cap B = \{2, 4\}$        $A \cap C = \{1, 2, 5\}$

$(A \cap B) \setminus (A \cap C) = \underline{\{4\}}$

$$\textcircled{6} (A \cap B) \setminus (A \cap C) = (A \cap B) \setminus C$$

$$1) A \cap B = \{2, 4\} \quad A \cap C = \{1, 2, 3\}$$

$$(A \cap B) \setminus (A \cap C) = \underline{\{4\}}$$

$$2) A \cap B = \{2, 4\} \quad (A \cap B) \setminus C = \underline{\{4\}}$$

$$\textcircled{7} A \cap (B \setminus C) = (A \cap B) \setminus C$$

$$1) B \setminus C = \{4, 6, 8\} \quad A \cap (B \setminus C) = \underline{\{4\}}$$

$$2) A \cap B = \{2, 4\} \quad (A \cap B) \setminus C = \underline{\{4\}}$$

$$\textcircled{8} (A \setminus B) \setminus C = (A \setminus C) \setminus (B \setminus C)$$

$$1) A \setminus B = \{1, 3, 5\} \quad (A \setminus B) \setminus C = \underline{\{5\}}$$

$$2) A \setminus C = \{4, 5\} \quad B \setminus C = \{4, 6, 8\}$$

$$(A \setminus C) \setminus (B \setminus C) = \underline{\{5\}}$$

$$\textcircled{9} A \cup B = A \cup (B \setminus A)$$

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

$$2) B \setminus A = \{6, 8\} \quad A \cup (B \setminus A) = \underline{\{1, 2, 3, 4, 5, 6, 8\}}$$

$$\textcircled{10} (A \cap B) \cup (A \cap \bar{B}) = A \quad U = \{1, 2, \dots, 8\}$$

$$1) A \cap B = \{2, 4\} \quad \bar{B} = \{1, 3, 5, 7\} \quad A \cap \bar{B} = \{1, 3, 5\}$$

$$(A \cap B) \cup (A \cap \bar{B}) = \underline{\{1, 2, 3, 4, 5\}}$$

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



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

$$1) A \cup B = \{1, 2, 3, 4, 5, 6, 8\} \quad \bar{B} = \{1, 3, 5, 7\}$$

$$A \cup \bar{B} = \{1, 2, 3, 4, 5, 7\}$$

$$(A \cup B) \cap (A \cup \bar{B}) = \underline{\{1, 2, 3, 4, 5\}}$$

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

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

$$1) \bar{A} = \{6, 7, 8\} \quad \bar{A} \cup B = \{2, 4, 6, 7, 8\}$$

$$(\bar{A} \cup B) \cap A = \underline{\{2, 4\}}$$

$$2) A \cap B = \underline{\{2, 4\}}$$

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

$$1) A \cup B = \{1, 2, 3, 4, 5, 6, 8\} \quad (A \cup B) \setminus C = \underline{\{4, 5, 6, 8\}}$$

$$2) A \setminus C = \{4, 5\} \quad B \setminus C = \{4, 6, 8\}$$

$$(A \setminus C) \cup (B \setminus C) = \underline{\{4, 5, 6, 8\}}$$

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

$$1. B \setminus C = \{4, 6, 8\} \quad A \setminus (B \setminus C) = \{1, 2, 3, 5\}$$

$$2. A \setminus B = \{1, 3, 5\} \quad A \cap C = \{1, 2, 3\}$$

$$(A \setminus B) \cup (A \cap C) = \{1, 2, 3, 5\}$$