

Ovdje treba iskoristiti činjenicu da je $X \Delta Y = (X \cap Y') \cup (X' \cap Y)$, a zatim primijeniti pravila algebre skupova. Tako imamo:

$$\begin{aligned} A \Delta (B \Delta C) &= A \Delta ((B \cap C') \cup (B' \cap C)) = \\ &= (A \cap ((B \cap C') \cup (B' \cap C))') \cup (A' \cap ((B \cap C') \cup (B' \cap C))) = \\ &= (A \cap (B' \cup C) \cap (B \cup C')) \cup (A' \cap B \cap C') \cup (A' \cap B' \cap C) = \\ &= (A \cap ((B' \cap C') \cup (B \cap C))) \cup (A' \cap B \cap C') \cup (A' \cap B' \cap C) = \\ &= (A \cap B' \cap C') \cup (A \cap B \cap C) \cup (A' \cap B \cap C') \cup (A' \cap B' \cap C) \end{aligned}$$

$$\begin{aligned} (A \Delta B) \Delta C &= ((A \cap B') \cup (A' \cap B)) \Delta C = \\ &= (((A \cap B') \cup (A' \cap B)) \cap C) \cup (((A \cap B') \cup (A' \cap B))' \cap C) = \\ &= (A \cap B' \cap C') \cup (A' \cap B \cap C') \cup ((A' \cup B) \cap (A \cup B')) \cap C = \\ &= (A \cap B' \cap C') \cup (A' \cap B \cap C') \cup ((A' \cap B') \cup (A \cap B)) \cap C = \\ &= (A \cap B' \cap C') \cup (A' \cap B \cap C') \cup (A' \cap B' \cap C) \cup (A \cap B \cap C) \end{aligned}$$

Vidimo da smo dobili identične izraze (ako zanemarimo poredak članova), tako da i polazni izrazi moraju biti identični.

Primjedba: Ovo je analogno sa sljedećim postupkom u iskaznoj algebri:

$$\begin{aligned} A \underline{\vee} (B \underline{\vee} C) &= A \underline{\vee} (B \overline{\vee} \overline{B} C) = A \overline{\overline{B} C \vee \overline{B} C} \vee \overline{A} (B \overline{\vee} \overline{B} C) = A (\overline{B} \vee C) (B \vee \overline{C}) \vee \overline{A} B \overline{C} \vee \overline{A} \overline{B} C = \\ &= A (\overline{B} \overline{C} \vee B C) \vee \overline{A} B \overline{C} \vee \overline{A} \overline{B} C = \overline{A} B \overline{C} \vee A B C \vee \overline{A} B \overline{C} \vee \overline{A} \overline{B} C \end{aligned}$$

$$\begin{aligned} (A \underline{\vee} B) \underline{\vee} C &= (\overline{A} \overline{B} \vee \overline{A} B) \underline{\vee} C = (\overline{A} \overline{B} \vee \overline{A} B) C \vee \overline{\overline{A} \overline{B} \vee \overline{A} B} C = \overline{A} \overline{B} C \vee \overline{A} B C \vee (\overline{A} \vee B) (A \vee \overline{B}) C = \\ &= \overline{A} \overline{B} C \vee \overline{A} B C \vee (\overline{A} \overline{B} \vee A B) C = \overline{A} \overline{B} C \vee \overline{A} B C \vee \overline{A} \overline{B} C \vee A B C \end{aligned}$$