

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

Primjedba: Ovaj postupak je analogan sa sljedećim postupkom u iskaznoj algebri:

$$\begin{aligned}
(A \vee C) B \vee A \bar{C} &= AB \vee BC \vee A \bar{C} = AB(C \vee \bar{C}) \vee BC \vee A \bar{C} = ABC \vee AB\bar{C} \vee BC \vee A \bar{C} = \\
&= (ABC \vee BC) \vee (AB\bar{C} \vee A \bar{C}) = BC \vee A \bar{C}
\end{aligned}$$