

データベースシステム 中間確認 1-1

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2020 年 11 月 2 日

中間確認 1-1 $NOT (A \text{ IMP } B) \text{ OR } (B \text{ IMP } C) \text{ OR } (A \text{ IMP } C) \text{ OR } (A \text{ IMP } B \text{ IMP } C)$

(与式) $= NOT (A \text{ IMP } B) \text{ OR } (B \text{ IMP } C) \text{ OR } (A \text{ IMP } C) \text{ OR } (A \text{ IMP } (B \text{ IMP } C))$ (\because IMP の結合則)

$= NOT (A \text{ IMP } B) \text{ OR } (B \text{ IMP } C) \text{ OR } (A \text{ IMP } C) \text{ OR } (A \text{ IMP } (NOT B \text{ OR } C))$

$= NOT (A \text{ IMP } B) \text{ OR } (B \text{ IMP } C) \text{ OR } (A \text{ IMP } C) \text{ OR } (NOT A \text{ OR } (NOT B \text{ OR } C))$

$= NOT (NOT A \text{ OR } B) \text{ OR } (B \text{ IMP } C) \text{ OR } (A \text{ IMP } C) \text{ OR } (NOT A \text{ OR } NOT B \text{ OR } C)$

$= NOT (NOT A \text{ OR } B) \text{ OR } (NOT B \text{ OR } C) \text{ OR } (A \text{ IMP } C) \text{ OR } (NOT A \text{ OR } NOT B \text{ OR } C)$

$= NOT (NOT A \text{ OR } B) \text{ OR } (NOT B \text{ OR } C) \text{ OR } (NOT A \text{ OR } C) \text{ OR } (NOT A \text{ OR } NOT B \text{ OR } C)$

ド・モルガン則より

$= NOT(NOT A) \text{ AND } NOT B \text{ OR } (NOT B \text{ OR } C) \text{ OR } (NOT A \text{ OR } C) \text{ OR } (NOT A \text{ OR } NOT B \text{ OR } C)$

二重否定より

$= A \text{ AND } (NOT B) \text{ OR } (NOT B) \text{ OR } C \text{ OR } NOT A \text{ OR } C \text{ OR } NOT A \text{ OR } (NOT B) \text{ OR } C$

$= A \text{ AND } NOT B \text{ OR } C \text{ OR } NOT A \text{ OR } C \text{ OR } NOT A \text{ OR } C$ (\because 同一律)

$= A \text{ AND } NOT B \text{ OR } C \text{ OR } (NOT A) \text{ OR } (NOT A)$ (\because 同一律)

$= A \text{ AND } NOT B \text{ OR } C \text{ OR } NOT A$ (\because 同一律)

$= A \text{ AND } NOT B \text{ OR } NOT A \text{ OR } C$ (\because 交換則)