

Resolution

$\neg A \vee B \vee E, \neg B \vee \neg D, C \vee A, \neg C, D, \neg E$

Assignment Project Exam Help

Apply resolution to this (set/conjunction of) clauses

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Which sequence(s) may be generated amongst

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$\neg A \vee E \vee \neg D, E \vee \neg D \vee C, \neg D \vee C, C, \square$

$B \vee E \vee C, E \vee \neg D \vee C, \neg D \vee C, C, \square$

$E \vee \neg D \vee C, \neg D \vee C, B \vee E \vee C \vee A, C, \square$

Resolution

$\neg A \vee B \vee E, \neg B \vee \neg D, C \vee A, \neg C, D, \neg E$

- Resolution with $\neg A \vee B \vee E$ and $\neg B \vee \neg D$ gives $\neg A \vee E \vee \neg D$
- Resolution with $\neg A \vee E \vee \neg D$ and $C \vee A$ gives $E \vee \neg D \vee C$
- Resolution with $E \vee \neg D \vee C$ and $\neg E$ gives $\neg D \vee C$
- Resolution with $\neg D \vee C$ and D gives C
- Resolution with C and $\neg C$ gives \square

Thus the sequence $\neg A \vee E \vee \neg D, E \vee \neg D \vee C, \neg D \vee C, C, \square$ may be generated by applying resolution

Resolution

$\neg A \vee B \vee E, \neg B \vee \neg D, C \vee A, \neg C, D, \neg E$

- Resolution with $\neg A \vee B \vee E$ and $C \vee A$ gives $B \vee E \vee C$
- Resolution with $B \vee E \vee C$ and $\neg B \vee \neg D$ gives $E \vee \neg D \vee C$
- Resolution with $E \vee \neg D \vee C$ and $\neg E$ gives $\neg D \vee C$
- Resolution with $\neg D \vee C$ and D gives C
- Resolution with C and $\neg C$ gives \square

Thus the sequence $B \vee E \vee C, E \vee \neg D \vee C, \neg D \vee C, C, \square$ may be generated by applying resolution