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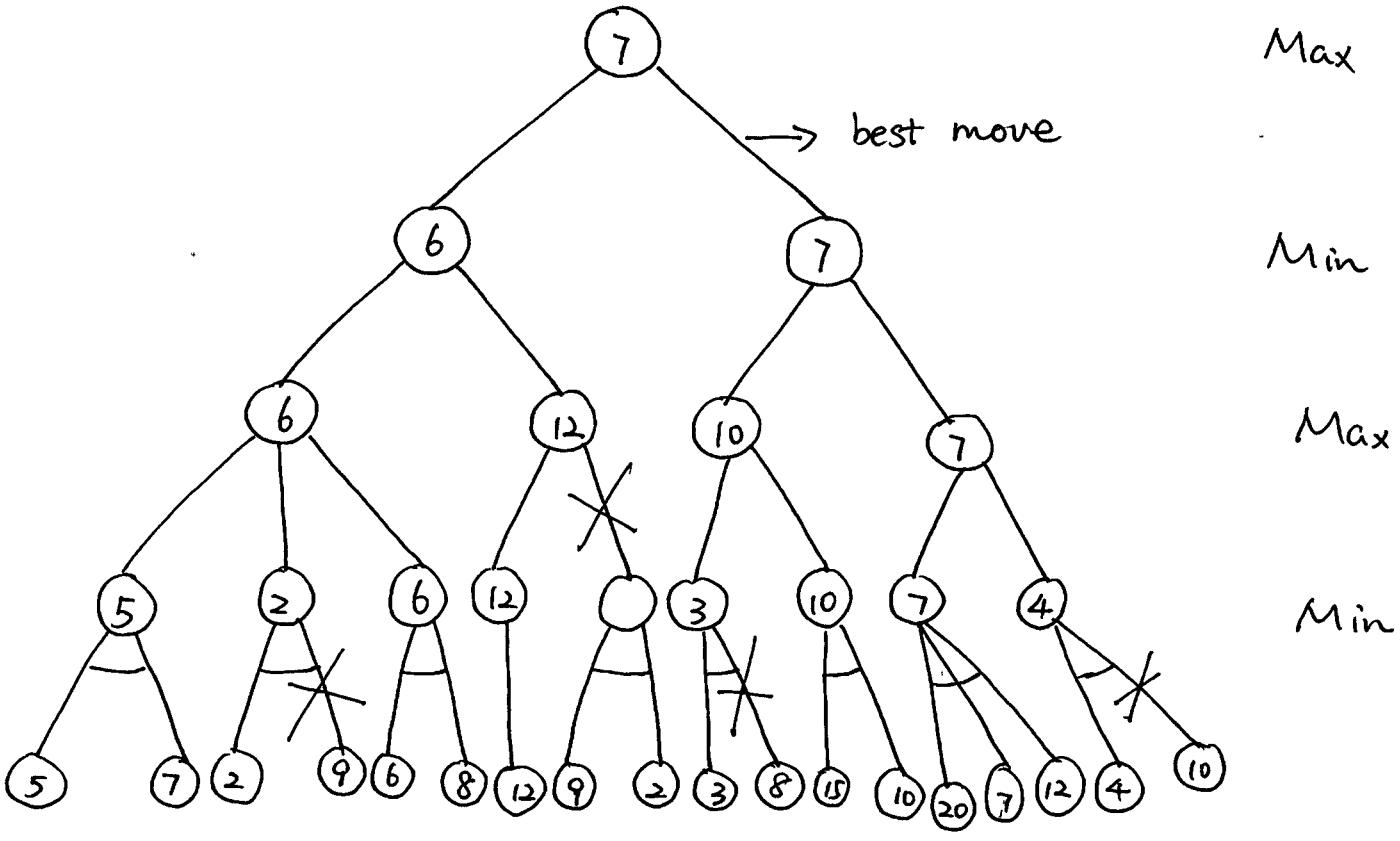
Problem 1.



Problem 2.

(1) $C \Rightarrow (A \Leftrightarrow E)$

$\neg C \vee ((A \Rightarrow E) \wedge (E \Rightarrow A))$

$\neg C \vee ((\neg A \vee E) \wedge (\neg E \vee A))$

$(\neg C \vee (\neg A \vee E)) \wedge (\neg C \vee (\neg E \vee A))$

$(\neg C \vee \neg A \vee E) \wedge (\neg C \vee \neg E \vee A)$

(2) $(\neg C \vee E) \Rightarrow B$

$\neg(\neg C \vee E) \vee B$

$(C \wedge \neg E) \vee B$

$(C \vee B) \wedge (\neg E \vee B)$

(3) $D \Rightarrow \neg B$

$\neg D \vee \neg B$

(4) $(A \wedge D) \Rightarrow \neg E$

$\neg(A \wedge D) \vee \neg E$

$(\neg A \vee \neg D) \vee \neg E$

$\neg A \vee \neg D \vee \neg E$

(5) $C \vee D \vee E$

(6) $E \Rightarrow D$

$\neg E \vee D$

Problem 3.

The clauses in Problem 2 is

① $\neg C \vee \neg A \vee E$

② $\neg C \vee \neg E \vee A$

③ $C \vee B$

④ $\neg E \vee B$

⑤ $\neg D \vee \neg B$

⑥ $\neg A \vee \neg D \vee \neg E$

⑦ $C \vee D \vee E$

⑧ $\neg E \vee D$

(1) set A = true (delete ②)

① $\neg C \vee E$

③ $C \vee B$

④ $\neg E \vee B$

⑤ $\neg D \vee \neg B$

⑥ $\neg D \vee \neg E$

⑦ $C \vee D \vee E$

⑧ $\neg E \vee D$

(2) set B = true (delete ③④⑤)

① $\neg C \vee E$

⑤ $\neg D$

⑥ $\neg D \vee \neg E$

⑦ $C \vee D \vee E$

⑧ $\neg E \vee D$

(3) set D = false (delete ③ ⑥)

① ¬C ∨ E

⑦ C ∨ E

⑧ ¬E ⊥

(4) set E = false (delete ⑧)

① ¬C

⑦ C

(5) set C = true

① ϕ

(6) set B = false (delete ⑤)

① ¬C ∨ E

③ C

④ ¬E

⑤ ¬D ∨ ¬E

⑦ C ∨ D ∨ E

⑧ ¬E ∨ D

(7) set C = true (delete ③ ⑦)

① E

④ ¬E

⑥ ¬D ∨ ¬E

⑧ ¬E ∨ D

(8) set E = true (delete ①)

④ ϕ

⑥ ¬D

⑧ D

(9) set A = false

② ¬C ∨ ¬E

③ C ∨ B

④ ¬E ∨ B

⑤ ¬D ∨ ¬B

⑦ C ∨ D ∨ E

⑧ ¬E ∨ D

(10) set B = true (delete ② ④)

② ¬C ∨ ¬E

⑤ ¬D

⑦ C ∨ D ∨ E

⑧ ¬E ∨ D

(11) set D = false (delete ④)

② $\neg C \vee \neg E$

⑦ $C \vee E$

⑧ $\neg E$

(12) set E = false (delete ②⑧)

⑦ C

(13) set C = ~~true~~. all satisfy

The Solution is A = false. B = ~~true~~. C = ~~true~~. D = false. E = false.