Elijah Andrushenko

CPTS 440
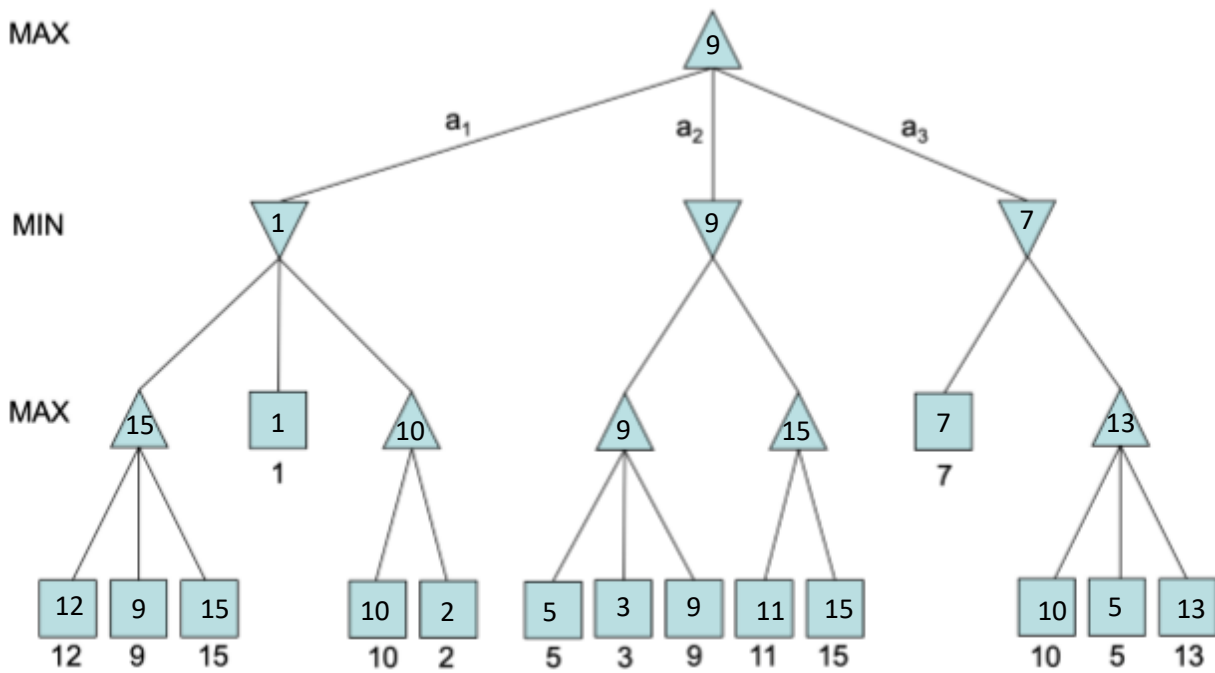
Artificial Intelligence

09-19-2019
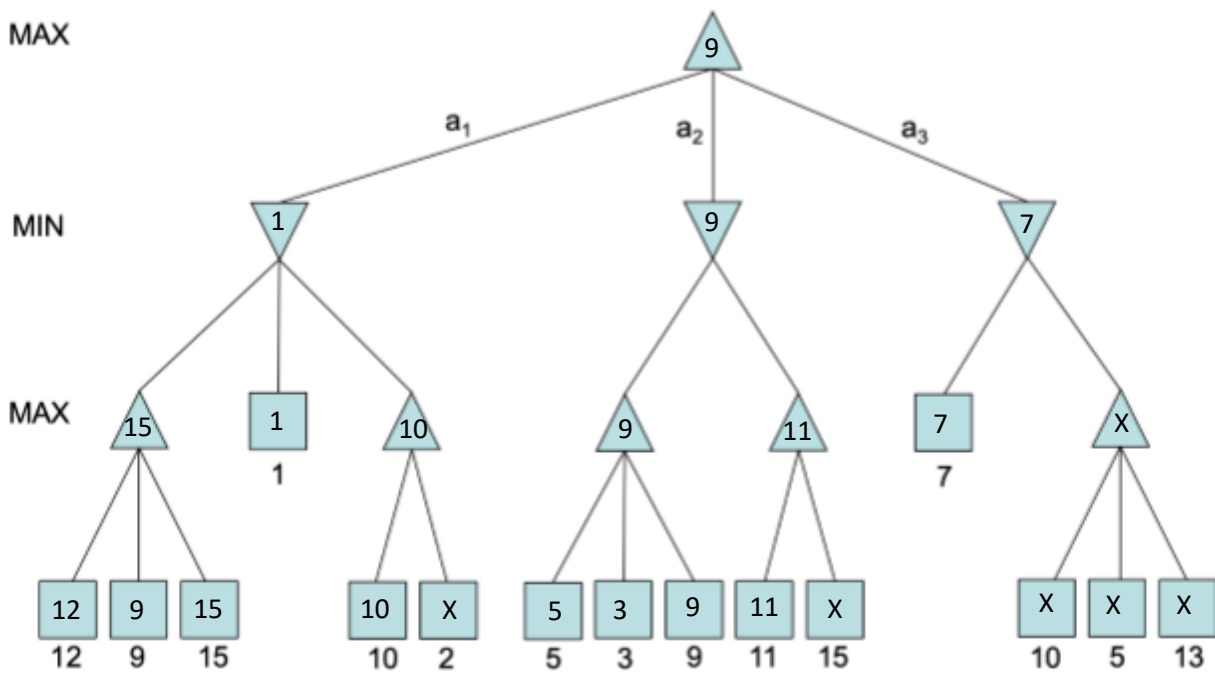
Homework 4

1.

A) MAX will choose a2 since that will return the maximal result in optimal play.

B) MAX should choose a2 since that will return the maximal result in optimal play.

2.

A)

R1: Like(Checkers) $\Rightarrow$ Like(Chess)

R2: Like(Computers) $\Rightarrow$ Like(Coding)

R3: (Like(Chess) ^ Like(Coding)) $\Rightarrow$ Learn(AI)

R4: Learn(AI) $\Rightarrow$ (Rich ^ Famous)

R5: Like(Checkers)

R6: Like(Computers)

B)

R1: ¬Like(Checkers) v Like(Chess)

R2: ¬Like(Computers) v Like(Coding)

R3: ¬Like(Chess) v ¬Like(Coding) v Learn(AI)

R4: (¬Learn(AI) v Rich) ^ (¬Learn(AI) v Famous)

R5: Like(Checkers)

R6: Like(Computers)

C)

Step	CNF	Steps Used
1	¬Like(Checkers) v Like(Chess)	0
2	¬Like(Computers) v Like(Coding)	0
3	¬Like(Chess) v ¬Like(Coding) v Learn(AI)	0
4	(¬Learn(AI) v Rich) ^ (¬Learn(AI) v Famous)	0
5	Like(Checkers)	0
6	Like(Computers)	0
7	¬Rich	0
8	Like(Chess)	1, 5
9	Like(Coding)	2, 6
10	Learn(AI)	3, 8, 9
11	¬Learn(AI) v Rich	4
12	Rich	10, 11
13	**Proof by Refutation**	7, 12