# Two parents α-β prune

Hi MoQi, thanks for the message. When a node has more than one parents, you need to duplicate the branch to each parent.
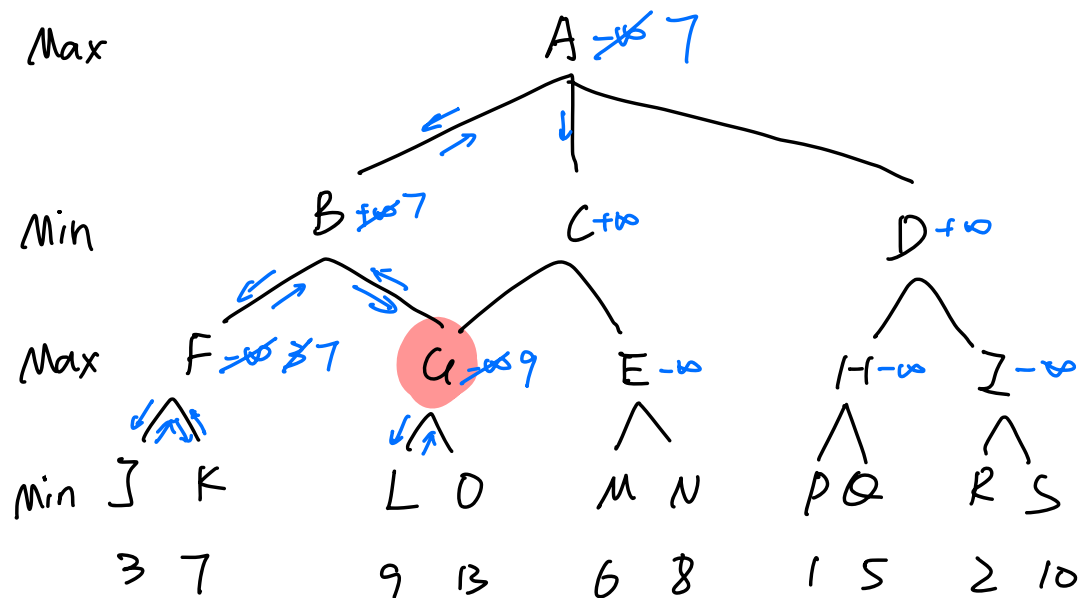For example, G-L-O has two parents B and C, you need to duplicate branch G-L-O for both B and C.
You can then decide if O can be pruned or not – if O needs to be used in another branch, it cannot be pruned.
Hope I answered your question ?
Cheers,
Lihui



Max   A →∞ 7

Min   B ∞ 7        C +∞            D +∞

Max   F →∞ ∞ 7    G →∞ 9   E -∞    H -∞   I -∞

Min   J  K        L  O     M  N    P  Q    R  S
      3  7        9  13    6  8    1  5    2  10

we can't prune the Node G (G-O),
because Node G has 2 parents

**Top diagram:**

Max — A $-\infty \nearrow 8$

Min — B $\not\infty \ 7$    C $\not\infty \not{13}\ 8$    D $+\infty\ 5$

Max — F $-\infty \not{8}\ 7$   G $-\infty\ 9\ 13$   E $-\infty \not{6}\ 8$   H $-\infty\ \not{1}$   I $-\infty$

Min — J   K    L   O    M   N    P   Q    R   S

3   7     9   13    6   8    1   5    2   10

(H annotation: 5)

**Bottom diagram (crossed out with red X):**

Max — A $-\infty \nearrow 8$

Min — B $\not\infty\ 7$    C $+\infty\ 9\ 8$    D $+\infty\ 5$

Max — F $-\infty \not{8}\ 7$   G $-\infty\ 9$   E $-\infty \not{6}\ 8$   H $-\infty\ \not{1}$   I $-\infty$

J   K    L   O    M   N    P   Q    R   S

3   7     9   13    6   8    1   5    2   10

(H annotation: 5)