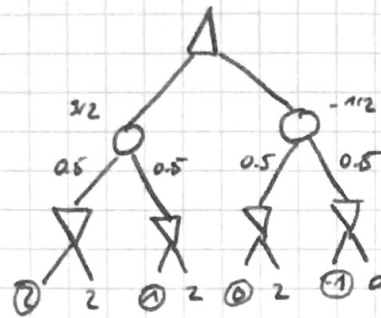


# Question 2 Pruning



$$x_i \in \mathbb{R}$$

(a)

$\Delta$ : maximize

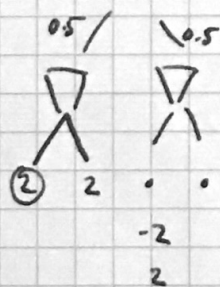
$\nabla$ : minimize

(b)

The values of the leaves 1-6 are not different, since 7th and 8th could be both greater than 3. (e.g. +2, +2)

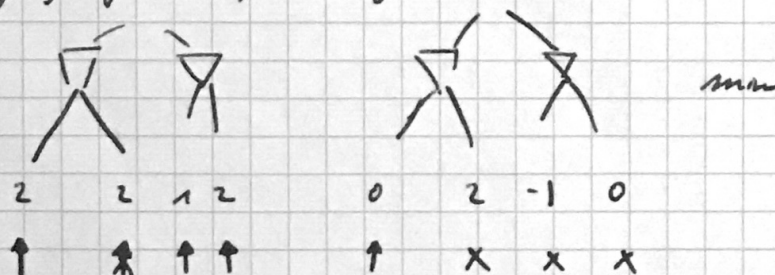
In case we know the 7th leaf to be -1, the 8th is not needed anymore since the rational opponent won't choose it.

(c) now restrict ourselves to  $x_i \in [-2, 2]$



the expected value can be between 0 and 2.

(d) by going from left to right:



makes 1-5 since 6-8 have no influence in this domain anymore.