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Übungsblatt Nr. 8
(Abgabetermin 20.12.2017)

Aufgabe 1

b

Tabelle 1: $\alpha\beta$-pruning times on top, Minimax-times below

Stones \Size	9	10	11	12	13
2	38ms 97ms	67ms 444ms	248ms -	444ms -	- -
3	35ms 108ms	387ms -	- -	- -	- -
4	3ms 2ms	8ms 10ms	209ms -	- -	- -
5			3ms 3ms	14ms 22ms	688ms -

Blank combinations are not possible.
Combinations marked with - take above 1s to find.

c

The heuristic is very simple: It returns the average distance of your stones to the other side of the board. In a game where our heuristic is player1, it usually pushes its stones forward together. Whereas if it is player2, it only pushes its first stone. It only moves the other stones if it has to. After 25 Games each as player1 and player2 we come to the following statistics:

Tabelle 2: Heuristic is Player1

Depth	Win	Draw	Loss
5	9	11	5
10	7	15	3
15	8	13	4

Tabelle 3: Heuristic is Player2

Depth	Win	Draw	Loss
5	16	0	9
10	11	1	13
15	14	1	10

The search runs in under 5 seconds with a depth of upto 15.