


Algorithmics	Student information	Date	Number of session
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Activity 1. Branch & Bound

My heuristic is so bad it doesn't make it past test3, I used the technique of counting the number of "?" in the board and pruning when a completed row is not correct. It doesn't improve times because all children that don't complete a row or column have the same heuristic value even when they lead to an incorrect state of the square. For example, if I have a column ?+?+? = 14 I can have 0+0+? And it won't prune because the column is not wrong yet, even when it will be impossible to make it correct.

Test case	Time for first solution (backtracking)	Number of developed nodes (backtracking)	Time for first solution (B&B)	Number of developed nodes (B&B)
Test00	LoR	5	196	3
Test01	LoR	356	4735	8
Test02	LoR	166	243	7
Test03	161	75683	Oot	-
Test04	179	80468	Oot	-
Test05	255	260049	Oot	-
Test06	LoR	3446	Oot	-
Test07	425	243125	Oot	-

I know the algorithm works but I couldn't find the reason for its terrible performance.