

Comparing the Efficiency of MINIMAX and ALPHA-BETA pruning algorithms

MINIMAX		ALPHA-BETA Pruning	
Time(sec)	Nodes Explored	Time(sec)	Nodes Explored
0.22520	59704	0.07429	21050
0.00331	926	0.00232	690
0.00035	60	0.00057	57
0.00006	4	0.00003	4

- **Alpha-Beta Pruning** consistently explores **fewer nodes** than Minimax in every step, proving that it effectively **cuts off unnecessary branches**.
- As in the first row, Minimax explores **59,704 nodes**, while Alpha-Beta explores only **21,050 nodes**.
- The **time** required for Alpha-Beta Pruning is consistently **lower** to Minimax.
- As in the first step, Minimax takes **0.22520 sec**, whereas Alpha-Beta takes only **0.07429 sec**

Conclusion:

Alpha-Beta Pruning is significantly **more efficient** than Minimax, as it reduces both computation time and the number of nodes explored.