Comparing uninformed planning searches

	Air Cargo Problem	Expansions Nodes	Goal Tests	New Nodes	Plan Length	Time elapsed in seconds	Optimality
Breath First Search	1	86	169	422	6	0.1032	GOOD
	2	3343	4609	30509	9	15.2630	GOOD
	3	14663	18098	129631	12	113.5781	GOOD
Depth First Graph Search	1	21	22	84	20	0.0149	BAD
	2	624	625	5602	619	3.9321	BAD
	3	408	409	3364	392	1.9464	BAD
Uniform Cost Search	1	55	57	224	6	0.0411	OPTIMAL
	2	4853	4855	44041	9	12.9817	OPTIMAL
	3	18223	18225	159618	12	56.3770	OPTIMAL

- Breath First Search (BFS): BFS or Shortest First Search will always find the shortest way in steps to the goal, but it takes more time than other searches.
- Depth First Search (DFS): The Depth First Search is faster than the BFS, but it generate long plan length, so in our case, this search is not optimal
- Uniform Cost Search (UCS): UCS or Cheapest First Search picks the path with the lowest total cost. For our problems this search would be the optimal compared to BFS and DFS.

A* Search
The A*search finds the shortest length path while expanding the minimum. It depends on the heuristic, that keeps the algorithm focused to reach the goal.

Heuristic	Air Cargo Problem	Expansions Nodes	Goal Tests	New Nodes	Plan Length	Time elapsed in seconds
ignore preconditions	1	41	43	170	6	0.0492
	2	1450	1452	13303	9	4.6306
	3	5040	5042	44944	12	18.1563
level-sum	1	11	13	50	6	1.0327
	2	86	88	841	9	177.7796
	3	324	326	2993	12	1104.3697

When we use the 'ignore preconditions' heuristic there are a far more expansions needed, although it is faster than the 'level-sum' heuristic. The 'level-sum' heuristic needs less goal tests, but considering the time needed, the 'ignore preconditions' heuristic does a better job.
One option to get better heuristics is to use a more relaxed problem, for example skip the negative Effects of a problem. So it gets easier to calculate. If the heuristic is too complicated and it takes more time to calculate and the performance will be bad.