Question 1

Air cargo problem 1:

	actions	nodes expanded	Search time (seconds)	Plan length
BFS	20	43	0.00715	6
DFS	20	21	0.00414	20
Uniform cost search	20	60	0.0198	6
Greedy best first graph search h_unmet_goals	20	7	0.00233	6
Greedy best first graph search h_pg_levelsum	20	6	0.42952	6
Greedy best first graph search h_pg_maxlevel	20	6	0.34259	6
Greedy best first graph search h_pg_setlevel	20	6	1.22816	6
Astar search h_unmet_goals	20	50	0.01029	6
Astar search h_pg_levelsum	20	28	1.11451	6
Astar search h_pg_maxlevel	20	43	1.14123	6
Astar search h_pg_setlevel	20	33	3.05931	6

Question 1

Air cargo problem 2:

	actions	nodes expanded	Search time	Plan length
BFS	72	3343	2.10862	9
DFS	72	624	3.03933	619
Uniform cost search	72	5154	3.42724	9
Greedy best first graph search h_unmet_goals	72	17	0.01977	9
Greedy best first graph search h_pg_levelsum	72	9	10.3749	9
Greedy best first graph search h_pg_maxlevel	72	27	20.97844	9
Greedy best first graph search h_pg_setlevel	72	9	26.30517	9
Astar search h_unmet_goals	72	2467	2.27277	9
Astar search h_pg_levelsum	72	357	262.60323	9
Astar search h_pg_maxlevel	72	2887	1513.30168	9
Astar search h_pg_setlevel	72	1037	1966.97975	9

Question 1

Air cargo problem 3:

	actions	nodes expanded	Search time	Plan length
BFS	88	14663	10.79925	12
Greedy best first graph search h_unmet_goals	88	25	0.03839	15
Greedy best first graph search h_pg_maxlevel	88	21	27.70352	13
Astar search h_unmet_goals	88	7388	8.62032	12
Astar search h_pg_levelsum	88	369	429.48796	12

Air cargo problem 4:

	actions	nodes expanded	Search time	Plan length
BFS	104	99736	94.32843	14
Greedy best first graph search h_unmet_goals	104	29	0.05851	18
Greedy best first graph search h_pg_maxlevel	104	56	101.10249	17
Astar search h_unmet_goals	104	34330	56.12166	14
Astar search h_pg_levelsum	104	1208	2410.73786	15

Question 1:

Which algorithm or algorithms would be most appropriate for planning in a very restricted domain (i.e., one that has only a few actions) and needs to operate in real time?

All algorithms have the same number of actions

Question 2:

Which algorithm or algorithms would be most appropriate for planning in very large domains (e.g., planning delivery routes for all UPS drivers in the U.S. on a given day)

Breadth first search

Question 3:

Which algorithm or algorithms would be most appropriate for planning problems where it is important to find only optimal plans?

Greedy best first graph search h_unmet_goals