	test10			burma14			ulysses16			westsahara29		
	distance (m)	time (s)	efficiency	distance (m)	time (s)	efficiency	distance (m)	time (s)	efficiency	distance (m)	time (s)	efficiency
Permutation	88.79	2.21686006	196.835	???	> 600	???	???	> 600	???	27603	> 600	???
Nearest	99.14	0.00010705	0.0106	38.69	0.00020814	0.0081	104.73	0.00022078	0.0231	36388.06	0.00075698	27.545
Nearest improved	99.14	0.00046277	0.0459	36.12	0.00124693	0.045	84.43	0.00136304	0.1151	33371.19	0.00355101	118.5014
Nearest insertion	101.05	0.00031996	0.0323	33.94	0.00092506	0.0314	83.14	0.00096393	0.0801	30653.26	0.00356317	109.2228
Farthest insertion	89.54	0.00042295	0.0379	31.83	0.00076079	0.0242	75.05	0.00051999	0.039	28264.53	0.00346971	98.0697
Random node insertion	88.79	0.00114894	0.102	30.88	0.00300789	0.0929	74.6	0.00279522	0.2085	28947.68	0.0066812	193.4052
Ant colony optimization	88.79	0.05300808	4.7066	31.98	0.12144804	3.8839	76.71	0.17087078	13.1075	29817.79	0.955235	28482.9966

	djibouti38			berlin52			qatar194			uy734		
	distance (m)	time (s)	efficiency	distance (m)	time (s)	efficiency	distance (m)	time (s)	efficiency	distance (m)	time (s)	efficiency
Permutation	6656	> 600	???	???	> 600	???	9352	> 600	???	79114	> 600	???
Nearest	9748.95	0.00114608	11.1731	8980.92	0.00159216	14.2991	11892.89	0.01624918	193.2497	102594.36	0.14572597	14950.6626
Nearest improved	6835.45	0.01022315	69.8798	8207.61	0.02349806	192.8629	11330.39	0.6836307	7745.8024	98205.1	38.3652842	3767666.571
Nearest insertion	8671.23	0.00825334	71.5666	9305.58	0.01998019	185.9273	11586.04	0.58444118	6771.3589	102513.83	31.6717062	3246787.905
Farthest insertion	6876.43	0.00582337	40.044	8262.01	0.0149889	123.8384	10687.7	0.36270881	3876.5229	98245.07	18.08484483	1776746.846
Random node insertion	7096.09	0.01926875	136.7328	8829.17	0.05548692	489.9034	10800.71	0.47153306	5092.8918	129837.5	20.42649984	2652125.673
Ant colony optimization	6815.8	1.92687678	13133.2068	8290.85	5.35481906	44396.0016	10352.05	324.3606539	3357797.707	???	???	???

	lu980		
	distance (m)	time (s)	efficiency
Permutation	11340	> 600	???
Nearest	14212.72	0.23411298	3327.3822
Nearest improved	13515.75	100.9557798	1364493.081
Nearest insertion	15386.73	76.38034725	1175243.78
Farthest insertion	13765.49	45.86605597	631368.7348
Random node insertion	???	> 600	???
Ant colony optimization	???	???	???

NOTES:

Smaller efficiency is **BETTER**

Some algorithms do not store calculated values in a database such as:

- Nearest

- Nearest insertion

The use of a database makes on average the calculation time of an algorithm 30% shorter, sometimes almost 50% !

	Nearest		Nearest improved		Nearest insertion		Farthest insertion		Random node insertion		Permutation	
	distance (m)	time (s)	distance (m)	time (s)	distance (m)	time (s)	distance (m)	time (s)	distance (m)	time (s)	distance (m)	time (s)
test10	99.14	0.00010705	99.14	0.00046277	101.05	0.00031996	89.54	0.00042295	88.79	0.00114894	88.79	2.21686006
burma14	38.69	0.00020814	36.12	0.00124693	33.94	0.00092506	31.83	0.00076079	30.88	0.00300789	???	> 600
ulysses16	104.73	0.00022078	84.43	0.00136304	83.14	0.00096393	75.05	0.00051999	74.6	0.00279522	???	> 600
westsahara29	36388.06	0.00075698	33371.19	0.00355101	30653.26	0.00356317	28264.53	0.00346971	28947.68	0.0066812	27603	> 600
djibouti38	9748.95	0.00114608	6835.45	0.01022315	8671.23	0.00825334	6876.43	0.00582337	7096.09	0.01926875	6656	> 600
berlin52	8980.92	0.00159216	8207.61	0.02349806	9305.58	0.01998019	8262.01	0.0149889	8829.17	0.05548692	???	> 600
qatar194	11892.89	0.01624918	11330.39	0.6836307	11586.04	0.58444118	10687.7	0.36270881	10800.71	0.47153306	9352	> 600
uy734	102594.36	0.14572597	98205.1	38.3652842	102513.83	31.6717062	98245.07	18.08484483	129837.5	20.42649984	79114	> 600
lu980	14212.72	0.23411298	13515.75	100.9557798	15386.73	76.38034725	13765.49	45.86605597	???	> 600	11340	> 600