

## Results for MINSUM\_20 (mTSP)

Keld Helsgaun, November 19, 2017

Instance	LKH-3
a280	4050
ali535	217037
att48	25319
att532	36303
bayg29	4679
bays29	5984
berlin52	13045
bier127	145581
brazil58	60179
brd14051	475277
brg180	2540
burma14	-
ch130	9831
ch150	9506
d198	72910
d493	119397
d657	109046
d1291	103356
d1655	119696
d2103	126645
d15112	1588365
d18512	649559
dantzig42	2439
dsj1000	19582811
eil51	886
eil76	928
eil101	1020
fl417	14413
fl1400	29320
fl1577	23446
fl3795	37477
fnl4461	186515
fri26	5326
gil262	3967
gr17	-
gr21	13208
gr24	7201
gr48	12633
gr96	119371
gr120	12133
gr137	191339

gr202	110856
gr229	190462
gr431	242540
gr666	383530
hk48	31375
kroA100	40134
kroB100	37112
kroC100	43994
kroD100	38248
kroE100	35745
kroA150	41037
kroB150	45747
kroA200	41439
kroB200	41738
lin105	32297
lin318	59881
linhp318	58565
nrw1379	59545
p654	59462
pa561	3210
pcb442	61079
pcb1173	64018
pcb3038	143024
pla7397	24255462
pla33810	67123070
pla85900	144511933
pr76	259777
pr107	84676
pr124	117630
pr136	151939
pr144	102215
pr152	159229
pr226	141252
pr264	70787
pr299	77809
pr439	125510
pr1002	345954
pr2392	407939
rat99	2740
rat195	3761
rat575	7971
rat783	10142
rd100	13405
rd400	18261
rl1304	271733
rl1323	295582

rl1889	334779
rl5915	582389
rl5934	565279
rl11849	931559
si175	26136
si535	53955
si1032	95884
st70	1372
swiss42	2863
ts225	207841
tsp225	7028
u159	83888
u574	42974
u724	52921
u1060	247512
u1432	159931
u1817	61088
u2152	67004
u2319	240062
ulysses16	-
ulysses22	23532
usa13509	20646798
vm1084	261901
vm1748	368933