Li & Lim benchmark

**Here you find instance definitions and the best known solutions (to our knowledge) for the 100, 200, 400, 600, 800, and 1000 customer instances of Li & Lim's PDPTW benchmark problems. The version reported here has a hierarchical objective: 1) Minimize number of vehicles 2) Minimize total distance. Distance and time should be calculated with double precision, total distance results are rounded to two decimals. Exact methods typically use a total distance objective and use integral or low precision distance and time calculations. Hence, results are not directly comparable.**

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Documentation

Below is an explanation of the format of the instance definitions (text files). Note that tabulator is used as field separator rather than spaces.

|  |  |  |
| --- | --- | --- |
| NUMBER OF VEHICLES | CAPACITY | SPEED  (not used) |
| K | Q | S |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CUST. NO. | X | Y | DEMAND | EARLIEST PICKUP/DELIVERY TIME | LATEST PICKUP/DELIVERY TIME | SERVICE TIME | PICKUP(index to sibling) | DELIVERY(index to sibling) |
| 0 | x0 | y0 | q0 | e0 | l0 | s0 | p0 | d0 |
| 1 | x1 | y1 | q1 | e1 | l1 | s1 | p1 | d1 |
| … | … | … | … | … | … | … | … | … |

Customer 0 is the depot.  For pickup orders, the PICKUP index is 0, whereas the DELIVERY sibling gives the index of the corresponding delivery order. For delivery orders, the PICKUP index gives the index of the corresponding pickup order.

For examples of solution specification files, see for instance the 100 customers page. The format is identical to the one used for VRPTW.