The MTZ formulation of the TSP is:

\[(1) \sum_j x_{ij} = \sum_j x_{ji} = 1 \forall i,\]

\[(2) u_i - u_j + 1 \leq (n - 1)(1 - x_{ij}) \forall i \neq 1, \forall j \neq 1, i \neq j.\]

where the \(x_{ij}\) are binary variables for all \((i, j) \in A\), and the \(u_i\) are continuous variables for \(i = 2, \ldots, n\).

Consider the following statement:

- If \(x\) represents a tour, then the only feasible value of the \(u_i\) variables for \(i = 2, \ldots, n\) is the position of city \(i\) in the tour.

If this statement is true, then prove it. If it is not true, then modify it to make it true, and prove that it is true after the modification.