

New Entries in *Myths and Counterexamples in Mathematical Programming*

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These are the 10 new entries since the September 16, 2009 version.
The total number of Myths is now 192.

LP *For a multistage stochastic program with non-anticipativity constraints, there exist optimal dual multipliers that are also non-anticipative.*

LP *A maximum dynamic-flow on a network defined by a static network with stationary data is temporally-repetitive.*

IP *Every continuous facet for the infinite group problem is piecewise linear.*

IP *Every point [line] cover contains a minimum point [line] cover.*

IP *The chromatic number of a connected graph decreases if any vertex is removed if, and only if, it decreases if any edge is removed.*

IP *The problem of finding $x \in \mathbf{Z}$ such that $Ax = b$, where $A \in \mathbf{Z}^{m \times n}$ and $b \in \mathbf{Z}^m$, is NP-complete.*

IP *Two TSP tours are adjacent only if there does not exist a distinct tour that contains their intersection and is contained in their union.*

IP *Simulated annealing converges more slowly than steepest descent when there is a unique optimum.*

IP *Using parallel processors to conduct multiple, independent random walks reduces the total computation time.*

NLP *If an NLP has a unique optimum that satisfies the Mangasaarian-Fromovitz constraint qualification and the quadratic growth condition, there is a locally convex augmented Lagrangian.*

Some Selected Oldies

LP *The duality theorem applies to infinite LPs.*

LP *The c -diameter of a non-empty polytope of dimension d with f facets cannot exceed $f - d$.
[Monotonic Hirsch Conjecture]*

IP *Every integral vector of an n -dimensional integral polyhedral pointed cone C can be expressed as a non-negative integral combination of at most n elements of the Hilbert basis of C .
[extension of Carathéodory's theorem]*

IP *If we reduce the computation time of each [parallel] processor, the makespan cannot increase.*

DP *In a dynamic lot size inventory model, decreasing setup costs does not increase total inventory.*

DP *If inventories for substitute products are pooled by a centralized system, the optimal total base-stock does not increase.*

NLP *Newton's method converges to a stationary point if Wolfe's conditions are satisfied.*

NLP *The BFGS method converges to a stationary point.*

MOP *Varying the weights of a convex combination of objectives generates the Pareto frontier.*

MOP *The Pareto-minimum graph for spanning trees is connected.*

SF *Among no-memory rules to order list items, the move-to-front rule minimizes the average cost.*

SF *When using LP for DEA, it does not matter if you obtain a basic or interior optimum.*