

Quiz 4: Nonlinear Optimization Results for Liangrui Lu

⚠ Correct answers are hidden.

Score for this attempt: **10** out of 10

Submitted Nov 11, 2021 at 11:04pm

This attempt took 5 minutes.

问题 1

1 / 1 pts

Nonlinear programming has the same format as linear programming, however either the objective function or the constraints (but not both) are nonlinear functions.

☐ True

☒ False

问题 2

1 / 1 pts

The highest point on each peak of a surface can be considered a local optimum, but the highest point among all of the peaks is the only global optimum.

☒ True

☐ False

问题 3**1 / 1 pts**

Decision variables cannot be multiplied by each other in the objective function of a nonlinear program.

☐ True☒ False**问题 4****1 / 1 pts**

Both linear and nonlinear programming models are examples of:

☐ constrained likelihood models☒ constrained optimization models☐ simple tableaus☐ goal programming models**问题 5****1 / 1 pts**

The Lagrange multiplier reflects the appropriate change in the objective function for a unit change in the _____ of the constraint equation.

- ☒ right-hand side
- ☐ objective function
- ☐ coefficient
- ☐ shadow price

问题 6**1 / 1 pts**

What solving method is most generally used to solve nonlinear programs in Excel Solver?

- ☐ Simplex LP or GRG Nonlinear
- ☐ LP Simplex
- ☒ GRG Nonlinear
- ☐ Evolutionary

问题 7**1 / 1 pts**

When solving a nonlinear program, the message “Solver found a solution. All constraints and optimality conditions are satisfied.” means that a global optimal solution has been found for the problem.

- ☐ True

☒ False

问题 8

1 / 1 pts

A nonlinear solver like GRG nonlinear is suitable for nonlinear models but it cannot solve most linear models.

☐ True

☒ False

问题 9

1 / 1 pts

A nonlinear solver ignores the initial decision variables.

☐ True

☒ False

问题 10

1 / 1 pts

When working with nonlinear optimization, there is no benefit in linearizing non-linear relationships that can be linearized.

☐ True☒ False

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