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▼ Week 1

Lecture 1

Lecture questions due Sep 13, 2016 at 19:30 IST



Recitation

Problem Set 1

Homework due Sep 13, 2016 at 19:30 IST



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Bookmark

Nonlinear Optimization

(1/1 point)

Which of the following is a non-linear program? (select all that apply)



$$\begin{array}{ll} \max & y \\ \text{s.t.} & y \geq 10 \end{array} \quad \left. \vphantom{\begin{array}{l} \max \\ \text{s.t.} \end{array}} \right\}$$



$$\begin{array}{ll} \max & 2 + 2y^2 \\ \text{s.t.} & xy = 5 \end{array} \quad \left. \vphantom{\begin{array}{l} \max \\ \text{s.t.} \end{array}} \right\}$$



$$\begin{array}{ll} \max & 3 + \sin(2y) \\ \text{s.t.} & \\ & y \leq \pi \end{array} \quad \left. \vphantom{\begin{array}{l} \max \\ \text{s.t.} \end{array}} \right\}$$



$$\begin{array}{ll} \max & \log(5x) + y \\ \text{s.t.} & \\ & |y| \leq 10 \end{array} \quad \left. \vphantom{\begin{array}{l} \max \\ \text{s.t.} \end{array}} \right\}$$



$$\begin{array}{ll} \max & 5x \\ \text{s.t.} & \\ & x \leq 10 \\ & x \geq 10 \end{array} \quad \left. \vphantom{\begin{array}{l} \max \\ \text{s.t.} \end{array}} \right\}$$



☐ none of the above



EXPLANATION

Solution

All of the above are acceptable non-linear programs because non-linear programs:

- Can have strict inequalities.
- Can have non linear terms and any type of constraint is permitted.
- Linear programs are special cases of non-linear programs.

You have used 1 of 1 submissions

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