Nonlinear Optimization

(1/1 point)

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

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

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

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

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

$$\left.\begin{array}{rl} \max & 5x \\ \text{s.t.:} & \\ & x \leq 10 \\ & x \geq 10 \end{array}\right\}$$

- [ ] 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