

MITx: 15.053x Optimization Methods in Business Analytics

Heli

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Lecture

Lecture questions due Oct 18, 2016 at 19:30 IST

(A)

Recitation

Problem Set 6

Homework 6 due Oct 18, 2016 at 19:30 IST

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Problem 4

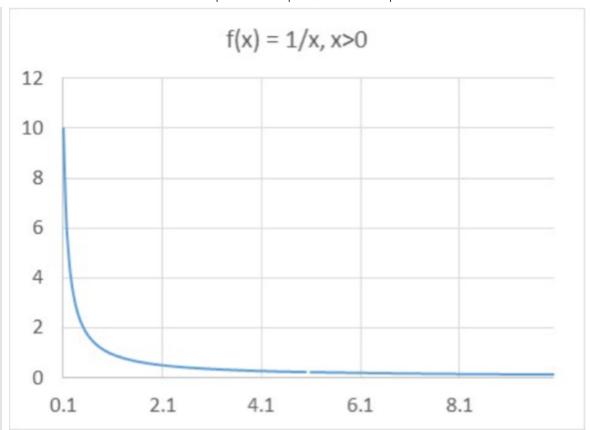
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PART A

1/1 point (graded)

For each part, determine whether the function is convex or not over its domain.

Exit Survey



$$f(x) = rac{1}{x} ext{ for } x > 0$$

Not Convex

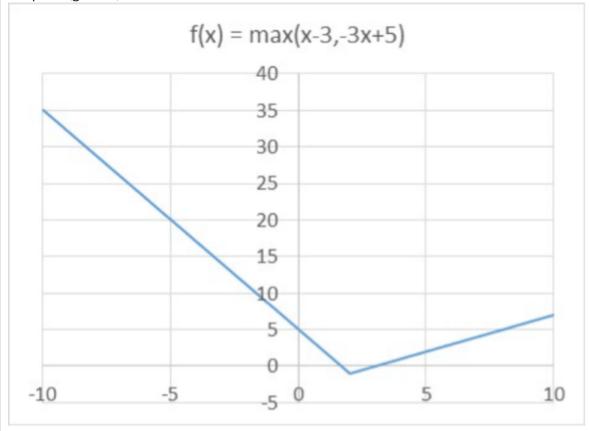
Convex

Submit

You have used 1 of 1 attempts

✓ Correct (1/1 point)

PART B



$$f(x)=max\{x-3,-3x+5\}$$

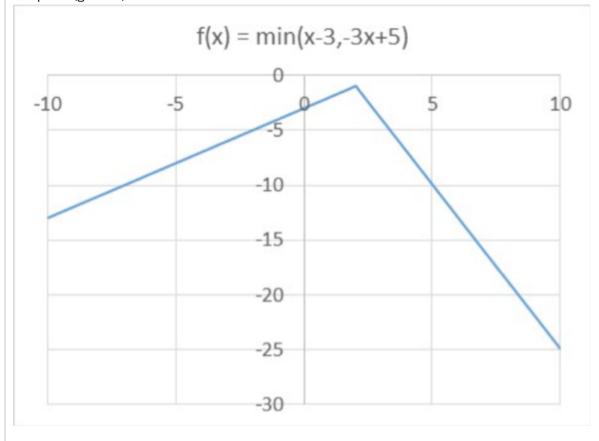
- Not Convex
- Convex

Submit

You have used 1 of 1 attempts

✓ Correct (1/1 point)

PART C



$f(x) = min\{x -$	-3, -3x + 5		
Not Convex	~		

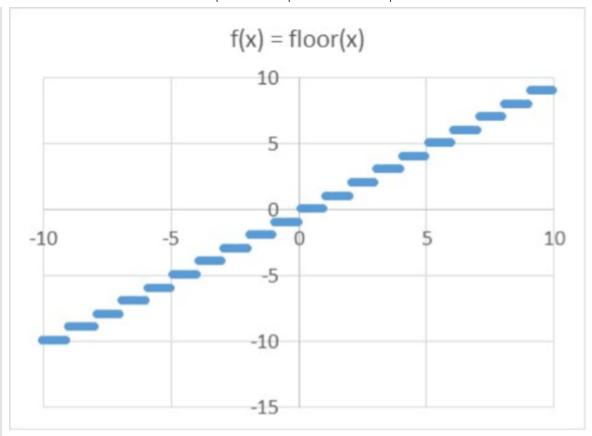
Convex

Submit

You have used 1 of 1 attempts

✓ Correct (1/1 point)

PART D



 $f(x) = \lfloor x \rfloor$, which is the largest integer not greater than x

Not Convex

✓

Convex

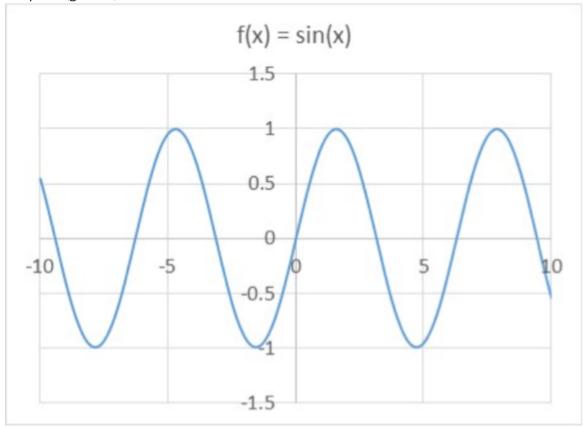
Submit

You have used 1 of 1 attempts

✓ Correct (1/1 point)

PART E

1/1 point (graded)



f(x)=sin(x)

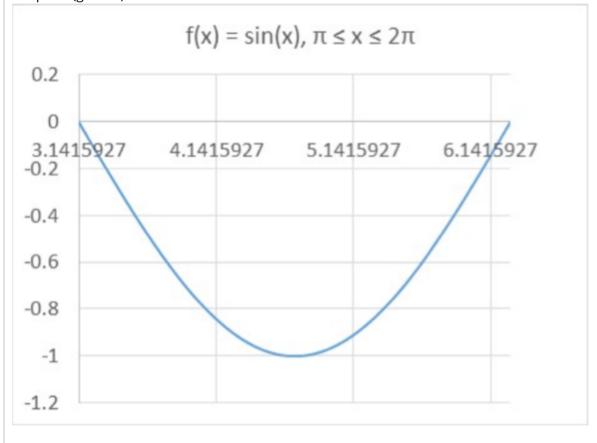
- Not Convex
- Convex

Submit

You have used 1 of 1 attempts

✓ Correct (1/1 point)

PART F





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