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sandipan_dey ~

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Recitation due Sep 13, 2021 20:30 IST Completed



Practice

Maximize the volume

3/3 points (graded)

We want to build a 3-dimensional rectangular box with side lengths x, y, and z. Suppose we want our box to enclose the largest possible volume, but we are required to pick side lengths that satisfy x+y+z=21. What side lengths x, y, z should we choose?

$$x = \boxed{7}$$
 Answer: 7

$$z = \boxed{7}$$
 Answer: 7

Solution:

We invite you to share your solution (using Lagrange multipliers) on the forum, or to compare your solution to someone else's posted answer!

Submit

You have used 1 of 25 attempts

1 Answers are displayed within the problem

A new constraint

3/3 points (graded)

We want to build a 3-dimensional rectangular box with side lengths x, y, and z. Suppose we want our box to enclose the largest possible volume, but we are required to pick side lengths that satisfy 4x+y+z=24. What side lengths x, y, z should we choose?

$$z = \boxed{8}$$

Solution:

We invite you to share your solution (using Lagrange multipliers) on the forum, or to compare your solution to someone else's posted answer!

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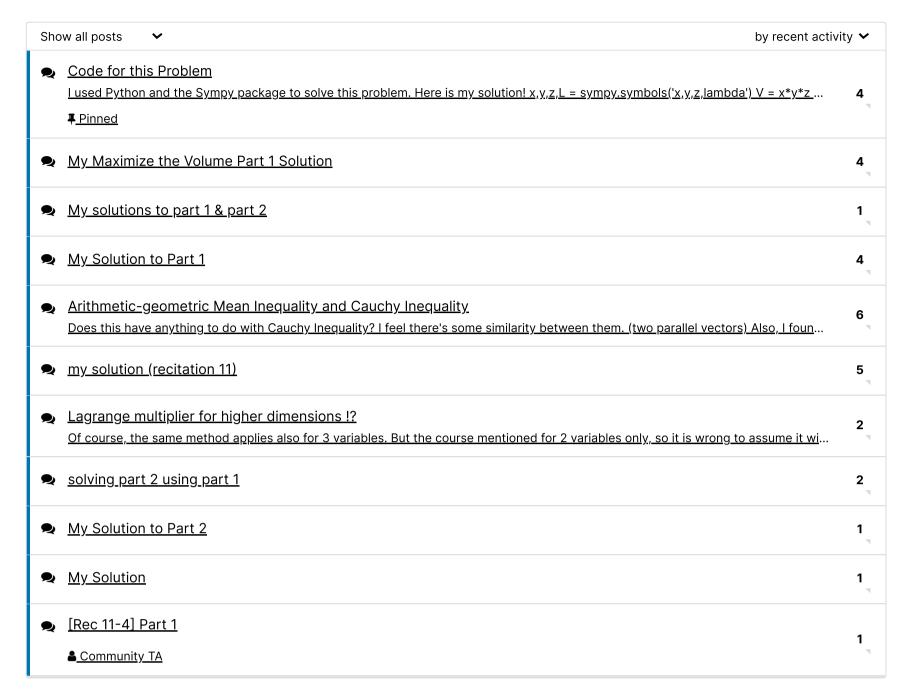
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1 Answers are displayed within the problem

4. Classic problems

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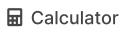
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