



# Calculus 3 Workbook

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Applied optimization

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MATH

## APPLIED OPTIMIZATION

- 1. Find the maximum volume of a rectangular box inscribed in a hemisphere with radius 4.
  
- 2. Find the minimum distance from  $(2, 2, -1)$  to the plane  $8x - 4y + z + 11 = 0$ .
  
- 3. Find the minimum distance from  $(-4, 4, 0)$  to the cone  $3x^2 + y^2 = z^2$ .



