

Problem Set 9
November 20, 2023

All numbered exercises are from the textbook *Calculus Vol. 3*, by OpenStax.

1. Exercises 4.7.311–339 (odd only).
2. Exercises 4.7.345–357 (odd only).
3. Find the point on the plane $x - 2y + 3z = 6$ that is closest to the point $P(0, 1, 1)$.
4. Find the points on the surface $y^2 = 9 + xz$ that are closest to the origin.
5. Find the maximum volume of a rectangular box that is inscribed in a sphere of radius r .