

MATH FOR DATA SCIENCE: PROBLEMS FOR PRESENTATIONS

Dr.P.M.Bajracharya

November 25, 2023

1. Determine the surface area of the portion of $2x + 3y + 6z = 9$ that is in the 1st octant.
2. Determine the surface area of the portion of $z = 13 - 4x^2 - 4y^2$ that is above $z = 1$ with $x \leq 0$ and $y \leq 0$.
3. Determine the surface area of the portion of $3 + 2y + \frac{1}{4}x^4$ that is above the region in the xy -plane bounded by $y = x^5$, $x = 1$ and the x -axis.
4. Determine the surface area of the portion of $y = 2x^2 + 2z^2 - 7$ that is inside the cylinder $x^2 + z^2 = 4$.
5. Determine the surface area region formed by the intersection of the two cylinders $x^2 + y^2 = 4$ and $x^2 + z^2 = 4$.