

Volume between a Cone and Ellipsoid**Math 126, Winter 2024****Final Examination***Page 6 of 8*

6. (12 points) Find the volume of the region that is inside the ellipsoid $x^2 + y^2 + 4z^2 = 25$ and above the cone $z = \sqrt{x^2 + y^2}$.

One of my students, Michael Petta, from a previous Math 126 quarter became very interested in this old exam problem and made a 3D animation using "[Manim](#)" (an online math animation tool we are exploring for cleaner animations).

This is a beautiful animation and solution to this problem. Thanks Michael!



Scan for visual solution and animation in Manim