MATH 223   Spring 2025
Assignment 17
Due: Wednesday, April 2

Reading

Read carefully Section 5.6 "Extreme Values" in our text *Multivariable Calculus: A Linear Algebra Based Approach.*

Writing

Write out careful and complete solutions of Exercises 13, 15, 16, and 17 of Chapter 5 as well as Problem A below.

A. The equation $\frac{x^2}{4} + \frac{y^2}{9} + z^2 - 6 = 0$ defines z implicitly as a function $z=f(x,y)$ near the point **P** where $(x = 2, y = 3, z = -2)$. The graph of the function f is a surface. Find its tangent plane at **P.**
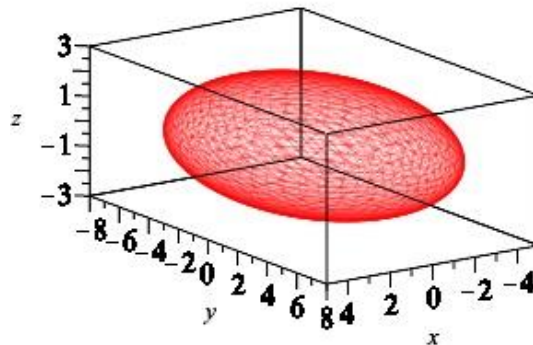
One View of the Surface Defined by
The Equation $\frac{x^2}{4} + \frac{y^2}{9} + z^2 - 6 = 0$