TUGAS 3 KALKULUS LANJUT

THE INTERSECTION OF 3 CYLINDERS

(Taken from Calculus: Concepts and Contexts by James Stewart)

Use computer program to do the first, third, and fourth case.

1. Draw the solid enclosed by the three cylinders $x^2 + y^2 = 1$, $x^2 + z^2 = 1$, and $y^2 + z^2 = 1$. Indicate the positions of the faces with equations of the corresponding cylinders.

2. Find the value of the solid in problem 1.

3. Draw the edges of the solid.

4. What happens to the solid in problem 1 if the radius of the firs cylinder is different from 1? Illustrate with the computer program.