

Mathematics 1110H – Calculus I: Limits, derivatives, and Integrals

TRENT UNIVERSITY, Winter 2021

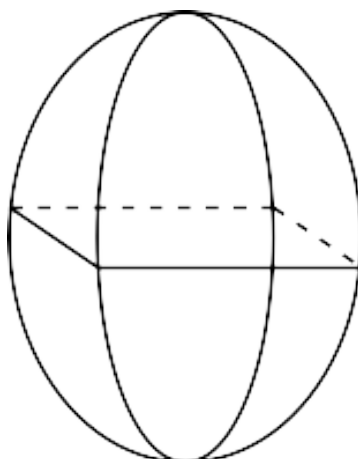
Assignment #6

A Round Square Volume Problem

Due on Friday, 9 April.

Submission: Scanned or photographed solutions are fine, so long as they are legible. Please try to make sure that they are oriented correctly – if they are sideways or upside down, they’re rather harder to mark! Submission as a single pdf is strongly preferred, but other common formats are probably OK in a pinch. Also, please do not submit a file in one of Maple’s (or comparable program’s) native format, though a printout of one to pdf would be more than acceptable. Please submit your solutions via Blackboard’s Assignments module. If Blackboard does not acknowledge a successful upload, please try again. As a *last* resort, email your solutions to the instructor at: sbilaniuk@trentu.ca

Two long cylinders, both of radius 1 m , intersect at right angles. The intersection of the two cylinders looks something like the following sketch:



1. Compute the volume of the intersection of the two cylinders. [10]