Homework 3

Instructions

Complete the problem below by having MATLAB compute them sequentially from a single .m file. Complete the assignment by posting a single .m file named appropriately to the canvas folder.

REMEMBER TO DRAW FLOWCHARTS!

Problems

1. The tank in a water tower has the geometry shown in the figure (the lower part is a cylinder and the upper part is an inverted frustum of a cone). Inside the tank there is a float that indicates the level of the water. Write a MATLAB program that determines the volume of the water in the tank from the position (height h) of the float. The program asks the user to enter a value of h in m, and as output displays the volume of water in m^3. The program must be able to detect non-sensical inputs (i.e.: h = 46m). Hint: you will need to be able to calculate the volume of water in a cylinder and the volume of water in a cone.