Math 323 Students  
University of Evansville  
Evansville, IN 47722  

October 30, 2009  

Dear Math students,

I recently landed a job at The Tank Depot. Part of my job is to design tanks for the various storage needs of our clients. Recently, our firm has been asked to design a storage tank for underground water storage. The customer’s specification call for a cylindrical tank with hemispherical ends; the tank is to hold 8000 m$^3$ of water. The customer also wants to use the smallest amount of material possible in building the tank. What radius and height do you recommend for the cylindrical portion of the tank?

We’d like to fabricate the tank and complete the underground installation before winter weather hits the Northeast. Please respond by Thursday, November 5.

Yours sincerely,

J.R. Doe  
Design Engineer