MARK BOX			
PROBLEM	POINTS		NAME:
1a	1		
1b	3		PIN:
	4		

Due in class on Thursday December 3, 2015.

INSTRUCTIONS

- To receive credit you <u>must</u>:
 - (1) show ALL your work, work in a logical fashion, indicate your reasoning (such helps with partial credit, no credit will be given for an answer that *just appears*),
 - (2) if a line/box is provided, then:
 - show your work BELOW the line/box
 - put your answer ON/IN the line/box
 - (3) if no such line/box is provided, then box your answer.
- You may discuss the shell method with others, asking questions on any shell method concept or examples EXCEPT for this specific homework problem. The work you turn in for this problem must be your own.

Honor Code Statement

I understand that it is the responsibility of every member of the Carolina community to uphold and maintain the University of South Carolina's Honor Code.

As a Carolinian, I certify that I have neither given nor received unauthorized aid on this homework.

I understand that if it is determined that I used any unauthorized assistance or otherwise violated the University's Honor Code then I will receive a failing grade for this course and be referred to the academic Dean and the Office of Academic Integrity for additional disciplinary actions.

Furthermore, I have not only read but will also follow the instructions on the homework.

Signature : ___

You are asked to express quantities as <u>integrals</u>. Do <u>**not**</u> hand-in the actual integration. (Of course, you can perform the integration on scratch paper to check your answer).

1. Let T be the triangle in the Cartesian plane with vertices

(0,0) , (0,h) , (r,0)

where h and r are fixed positive constants.

1a. Express the area of the T as an integral with respect to x.

Answer:

1b. Using the <u>shell method</u>, express as an integral (or as integrals) the volume of the solid generated by revolving T about the y-axis.

Answer: