

Figure 1:

Mathematics 122 A,D

Fall 2001

Quiz 5

Due October 5

Study Group Members

Name

Directions: Be sure to include in-line citations, including page numbers if appropriate, every time you use the results of discussion, a text, notes, or technology. **Only write on one side of each page.**

"Anyone can do any amount of work provided it isn't the work he is supposed to be doing at the moment."

— Robert Benchley

"The sole cause of all human misery is the inability of people to sit quietly in their rooms." – Blaise Pascal, 1670

Problems

1. Find the volume common to two right circular cylinders of radius R that meet at a right angle. A physical model is available for perusal at my office. The figure below shows one-eighth of the region (note the axes of the cylinders are perpendicular). [Hint: Use horizontal cross-sections.]