Figure 1:

Mathematics 122 A,D   Fall 2001   Quiz 7

Due November 2

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.**

"The intelligent man finds almost everything ridiculous, the sensible man hardly anything." – Johann von Goethe

1 Problems

1. In the figure below let $g(\theta)$ denote the area of triangle $\triangle PQR$ and $f(\theta)$ denote the area of the curvilinear region with vertices P, Q, R. Use trigonometric functions to write the area functions $f(\theta)$ and $g(\theta)$ and then use L'Hôpital's Rule to compute

$$\lim_{\theta \to 0^+} \frac{f(\theta)}{g(\theta)}.$$