

Math 10360 - Activity 4 - Spring 2007
March 8, 2007

Name: _____

1. (a) Find the centroid of the region bounded by the lines $y = x$, $x = 1$, and the x -axis.

(b) Could you have found this centroid without using integration? If so, how?

2. (a) Find the centroid of the region bounded by $f(x) = x^2$, $x = 1$, and the x -axis.

(b) Now let $n \geq 1$ be a constant. Find the centroid of the region bounded by $f(x) = x^n$, $x = 1$, and the x -axis.

(c) As $n \rightarrow \infty$, what does the region in part (b) look like and where is its centroid?