

Name: \_\_\_\_\_  
MAT 296

Quiz 1: Areas & Volumes  
Spring 2015

(i) Sketch the region bound by the curves  $y = 4x$  and  $y = 4x^2$ .

(ii) Find the *area* of this region.

(iii) Find the volume obtained by rotating this region about the  $y$ -axis.

(iv) Set up the an integral for finding the volume obtained by rotating this region about the line  $y = -2$ .  
**You only need to set this integral up. You do not need to find the value.**