Math 125A Summer 2009 **Name:** _____

Quiz #2

Show your work. Closed Notes.

1. (7 points) Evaluate the following integrals, if they exist.

   (a) $\int_0^4 x^3\sqrt{x^2+9}\,dx$

   (b) $\int_{-3}^3 x^3\sqrt{x^2+9}\,dx$

(Continued on back)

2. (8 points) Let R be the region enclosed by the functions $x = y^2$ and $y = x^3$. Determine the volume of the solid formed by rotating R around the y-axis.