Math 102 (Semester 101)   Name:_____
Quiz Two   ID Num:_____
                                 Section:_____   Serial Number: _____

Set up integrals to calculate the volumes of the following solids. Do NOT calculate the integral.

1. The solid formed by the region in the first quadrant bounded by $y = \sin x$ and $y = 1/2$, rotated about the line $x = -1$.

2. The solid formed by the region bounded by $y = \tan^{-1} x$, $y = 2x$ and $y = \pi/4$ rotated about the y-axis.

3. The solid whose base is the region bounded by $y = x^2$ and $y = x^3$, and whose cross-sections perpendicular to the x-axis are equilateral triangles.

4. Bonus question: Calculate the integral in the second question.