Math 1211: Recitation #4 **Winter 2014**

Name:	**A#:**	**Section:**

1. Let $\mathcal{R}$ be the region bounded between the curves $y = e^{2x}$ and $y = 1 - x$, between $x = 0$ and $x = 1$. Sketch the region $\mathcal{R}$, and find the volume of the solid obtained by revolving it around the x-axis.

2. Give **expressions** (in terms of definite integrals) for the volumes of the solids obtained by revolving the region $\mathcal{R}$ from Question #1 about the following axes. **Do not evaluate the integrals!**

   - The line $y = -2$.

   - The line $y = 10$.

   - The y-axis.

3. Let $\mathcal{Q}$ be the region bounded between the curves $x = y^2$ and $y = 2x - 1$.

   (a) Sketch the region $\mathcal{Q}$. Label all relevant points and curves.

   (b) Find the volume of the solid obtained by revolving $\mathcal{Q}$ around the y-axis.