Name _____

Homework 10
section 8.2

1. (1.5ea) Write an integral which represents the volume of the solid resulting from rotating the area bounded by the graph of $y = 4x^2$, the x-axis, y-axis, and $x = 1$ around the given line.

   (a) x-axis

   (b) $x = -1$

   (c) $x = 1$

   (d) $y = 8$

2. (4) Find the length of the curve defined by the parametric equations $x = t^2, y = \frac{2}{3}t^3$ for $0 \leq t \leq 2$.

3. (5) Find the volume of the solid obtained by rotating the region bounded by $y = 2\sqrt{x}$ and $y = \frac{1}{2}x$ about the x-axis.

4. (5) Find the volume of the solid obtained by rotating the region bounded by $y = 2\sqrt{x}$ and $y = \frac{1}{2}x$ about the line $y = 10$.