

Math 181
Fall, 2009

Name _____

Homework #2
Due Wednesday, August 2
No late papers accepted! No excuses!

1. Find the length of the curve $x = \frac{1}{3}y^{\frac{3}{2}} - y^{\frac{1}{2}}$ from $y = 1$ to $y = 9$.

2. Find a curve through the point $(1, 0)$ whose length from $x = 1$ to $x = 2$ is

$$L = \int_1^2 \sqrt{1 + \frac{1}{x^2}} dx$$

3. Find the volume of the solid generated by revolving the region bounded by

$$y = \sqrt{x} \text{ and } y = \frac{x^2}{8}$$

a) about the x-axis

b) about the y-axis