

Name _____

Section A, C, D 10

MA 104, Quiz #8

15 May, 2008

Instructions: The quiz is worth 15 points. You are allowed to use technology for this quiz. **Explain all work for full credit.** Good luck!

1. The equation of the wall for the left outfield fence is

$$y(x) = 3 + 0.36397\sqrt{162409 + x^2} - 0.000788323(162409 + x^2), \quad 0 \leq x \leq 150.$$

Approximate the amount of material needed to make the wall to two decimal places.

2. Oil leaked from a tank at a rate of $r(t)$ liters per hour. The rate decreased as time passed and values of the rate at two-hour intervals are shown in the table. Find lower and upper estimates for the total amount of oil that leaked out.

$t(h)$	0	2	4	6	8	10
$r(t)$	8.7	7.6	6.8	6.2	5.7	5.3

3. The speed of a runner increased steadily during the first three seconds of a race. Her speed at half-second intervals is given by some continuous function. Describe what the area under the curve tells you. (Hint: Labels for an answer may help to answer this question.)