Math 151
Quiz 7
Spring 2006

Show all work in a neat and organized fashion. Clearly indicate your answers.
20 points possible.

1. (4 pts.) The velocity graph of a braking car is shown on a supplemental page. Estimate the distance travelled by the car from time $t = 0$ to time $t = 8$ seconds, by using a right sum with 4 rectangles.

2. (4 pts.) The graph of g consists of two straight lines and a semicircle, shown on a supplemental page. Use the graph to evaluate the integral.

$$\int_0^{10} g(x)\,dx$$

3. (4 pts.) Find the left Riemann sum for the function $f(x) = 3 + x^2$ over the interval $2 \leq x \leq 14$ using four rectangles of equal width.

4. Find $\displaystyle\int_4^4 \tan x\,dx$.

5. (4 pts.) If $\displaystyle\int_1^{11} f(x)\,dx = 6$, $\displaystyle\int_{11}^{15} f(x)\,dx = 3$, and $\displaystyle\int_1^4 f(x)\,dx = 18$, find $\displaystyle\int_4^{15} f(x)\,dx$.