Math 151
Quiz 10

Justify all answers with neat and organized work. Clearly indicate your answers. 10 points possible.

1. (1 pt.) Find $\int_3^3 \tan z \, dz$.

2. (3 pts.) Suppose $\int_0^1 g(x)\,dx = 2$, $\int_1^2 g(x)\,dx = 3$, and $\int_1^2 h(x)\,dx = 5$.

(a) Find $\int_0^2 g(x)\,dx$.

(b) Find $\int_2^1 g(x)\,dx$.

(c) Find $\int_1^2 [g(x) + h(x)]\,dx$.

3. (2 pts.) If $f(x) = 6$ for all x, find $\int_{-2}^3 f(x)\,dx$.

4. (2 pts.) Suppose $4 \le f(x) \le 8$ whenever $3 \le x \le 10$. Find the best lower and upper estimates for $\int_3^{10} f(x)\,dx$.

5. (2 pts.) A table of values of an increasing function f is shown. Use the table to find the best upper estimate for $\int_0^{30} f(x)\,dx$.

x	0	10	20	30
$f(x)$	-5	-3	7	11