# Quiz

**Directions:** Carefully read each question below and answer to the best of your ability in the space provided. You **MUST** show your work to receive full credit!

1. (5 points) Use the fundamental theorem of calculus to find $F'(x)$ for

$$F(x) = \int_0^{x^2-3x+1} \sqrt{5t-4}\ dt$$

2. (5 points) Recall that the average value of a function $f(x)$ on $[a, b]$ is

$$f_{\text{avg}} = \frac{\int_a^b f(x)\,dx}{b-a}.$$

Suppose that the average value of $f(x)$ on $[4, 26]$ is 5. Find the value of $\int_4^{26} f(x)\ dx$.

Name: _____

Section (circle one):          021          022          023          024

| Question: | 1 | 2 | Total |
|-----------|---|---|-------|
| Points:   | 5 | 5 | 10    |
| Score:    |   |   |       |