Math 2320 - Quiz 2

Name:_____

1. Compute the following derivatives.

   (a) $\dfrac{d}{dx}\displaystyle\int_3^x e^{t^2}\,dt$

   (b) $\dfrac{d}{dx}\displaystyle\int_x^{2x} e^{t^2}\,dt$

2. For the following function find all of the critical points and classify the ex-tremma using the first derivative test.

$$f(x) = x^3 + 6x^2 + 9x - 1$$

3. For the following function compute the integral using the definition of the integral (do not use the FTC).

$$\int_0^3 x^2 - 3\,dx$$