

Name: _____

MA 2320 Quiz 3

1. $\frac{d}{dx} \left[\int_1^{x^2-x} f(t) dt \right]$
2. $\frac{d}{dx} \left[\int_x^{2x} \sin(t^2 + t) dt \right]$
3. $\int_1^2 x^2 - \sqrt{x} + 1 \, dx$
4. $\int_0^1 \sin(x) - \frac{1}{1+x^2} - e^x \, dx$
5. $\int_1^2 \frac{3}{x} - \frac{7}{x^2} \, dx$
6. Find the area between the function $f(x) = x^3$ and the x-axis from $x = -1$ to $x = 1$
7. Compute the integral $\int x^2(x^3 + 1)^{-2} \, dx$
8. Compute the integral $\int \sin(x) \sin(\cos(x)) \, dx$
9. Compute the integral $\int \frac{e^x}{1 + e^{2x}} \, dx$