

Name: _____

Date: _____

Instructions: Though calculators can be used for all the questions, all problems require you to show your work. Any answer without proper justification will receive **ZERO** credit. Only **EXACT** answers will receive full credit unless otherwise noted.

1. Determine the *general* antiderivative of $f(x) = 9x^5 + \sin(8x) - e^{3x}$

2. Determine $\int (\sec^2 x + 11x^5 + 7)dx$

3. Determine the function whose slope at (x, y) is $-5x^3 + 6x$ and passes through $(-2, 7)$.