Calculator Problems

I. Graph a Function

_____ 1. Graph the following function and locate its x-intercepts:
$F(x) = 6x + 12 + 2\cos(x)$

II. Find the Zeros of a Function

_____ 2. Determine the intersection of the following functions:
(Be certain that your calculator is in radians!)
$y = 2\cos(x)$ and $y = -6x - 12$

_____ 3. Solve the following equation:
$10xe^{8x^2} = 4$

III. Find the Numerical Derivative

_____ 4. Determine the value of the derivative at x = 3:
Given $f(x) = 3.4x^5 - 21x + 7$
Determine $f'(3) =$

IV. Find the Numerical Integral

_____ 5. Determine the numerical value of the following integral:
$\int_0^2 \left(6 - \sin(x)\cos(x)\right) dx =$

_____ 6. Determine the numerical value of the following integral:
$\int_{-2}^{7.5} e^{x^2}\, dx =$