Name: _____

1. Use the fundamental theorem of calculus to find the definite integrals.

   (a) $\displaystyle\int_{-\pi/2}^{\pi/2} \cos(x)\, dx \;=\;$

   (b) $\displaystyle\int_{0}^{1} \left(1 + x^2\right)\, dx \;=\;$

   (c) $\displaystyle\int_{-1}^{1} \frac{1}{\sqrt{1 - x^2}}\, dx \;=\;$

2. Find $\displaystyle\int \frac{4x}{2x^2 + 3}\, dx$