

Name: \_\_\_\_\_

**NO CALCULATORS**  
**5 points each**

1.  $\int x \sin x^2 dx$

2.  $\int \frac{e^{2x}}{e^{2x} + 3} dx$

3.  $\int \frac{x}{x^2 + 1} dx$

4.  $\int \sin^2 x + \cos^2 x dx$

5.  $\int \frac{x^2}{x^2 + 1} dx$  Hint: Use division first.