Math 166: Honors Calculus II   Name:⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯
Quiz 1   *Jan. 25, 1996*

1. a) State the First Fundamental Theorem of Calculus.

   b) State the Second Fundamental Theorem of Calculus.

   c) Use a) to prove b)

2. a) Integrate $\int \sin^3(x) \cos^2(x)\, dx$.

b) Integrate $\int x^2 \sin(x)\, dx$.

c) Compute $\dfrac{d}{dx} \displaystyle\int_{3-x}^{x^3} \sqrt{1 + t^2 + t^4}\, dt$.