

Midterm Exam Math 22 Spring 2008

Please be sure to include your name, student identification number, and discussion section number on the cover page of your blue book.

This exam consists of indefinite and definite integrals. Evaluate them and simplify your answers as much as possible. Show all work! You have 50 minutes to complete the exam. Good luck!

///

1. (25 points)

$$\int_0^{\pi/4} x^2 \cos 2x \, dx$$

2. (25 points)

$$\int 4x \cos^4(x^2) \, dx$$

3. (25 points)

$$\int_0^{\pi/4} \sin 6x \sin 7x \, dx$$

4. (25 points)

$$\int \frac{dx}{(x^2 - 1)^{5/2}}$$

5. (*Extra Credit, 5 extra points for correct answer with correct explanation*)

$$\int_0^{2\pi} \sin^{25} x \, dx$$