

Math 142, Exam 1, Spring 2016

Write everything on the blank paper provided. **You should KEEP this piece of paper.** If possible: return the problems in order (use as much paper as necessary), use only one side of each piece of paper, and leave 1 square inch in the upper left hand corner for the staple. If you forget some of these requests, don't worry about it – I will still grade your exam.

The exam is worth 50 points. Each problem is worth 10 points. Please make your work coherent, complete, and correct. Please *CIRCLE* your answer. Please **CHECK** your answer whenever possible.

No Calculators or Cell phones.

1. Find $\int \frac{dx}{(x^2 - 1)^{3/2}}$. **Please check your answer.**
2. Find $\int \sec^4 x \, dx$. **Please check your answer.**
3. Find $\int \cos 3x \cos 4x \, dx$.
4. Find $\int e^{4x} \sin x \, dx$. **Please check your answer.**
5. Find the area of the region bounded by $y^2 - x - 1 = 0$ and $y - x + 1 = 0$.
Please draw a meaningful picture.