Calculus II	Name:
Study Guide 15	Class:
Due Date:	Score:

No Work \Leftrightarrow No Points

Use Pencil Only \Leftrightarrow Be Neat & Organized

1. (5 points) Evaluate: $\int_0^{\pi} \sin^2 x \cos^4 x \, dx$

2. (5 points) Evaluate: $\int_0^{\pi/4} \sec^4 x \tan^4 x \, dx$

2. _____

1. _____

3. (5 points) Evaluate: $\int_{\pi/4}^{\pi/2} \cot^3 x \, dx$

4. (5 points) Evaluate: $\int_{\pi/6}^{\pi/3} \csc^3 x \, dx$

5. (2 points) Evaluate:
$$\int_{-1}^{1} x \tan^2 x \, dx$$

5. _____

4. _

3. ____

6. (8 points) Find the area of the region bounded by $y = \sin^3 x$ and $y = \cos^3 x$ for $\pi/4 \le x \le 5\pi/4$. Drawing required.

7. (6 points) Let
$$I = \int_0^{\pi/4} \tan^6 x \sec x \, dx$$
. Evaluate $\int_0^{\pi/4} \tan^8 x \sec x \, dx$ in terms of I

7. _____

8. (6 points) Evaluate: $\int_0^{\pi/4} \sqrt{1 - \cos 4x} \, dx$

9. (8 points) Find the volume generated by rotating the region bounded by $y = \sin^2 x$, y = 0, x = 0 and $x = \pi$ by the x- axis. Drawing required.

9. _____