

Calculus II

Name: _____

Study Guide 13

Class: _____

Due Date: _____

Score: _____

No Work \Leftrightarrow No Points

Use Pencil Only \Leftrightarrow Be Neat & Organized

1. (3 points) Evaluate: $\int_1^{\ln 1} e^x dx$

1. _____

2. (4 points) Evaluate: $\int_0^1 x e^x dx$

2. _____

3. (4 points) Evaluate: $\int_0^{\pi/4} x \cos x dx$

3. _____

4. (2 points) Evaluate: $\int_1^1 \tan x^2 dx$

4. _____

5. (5 points) Evaluate: $\int \cot^{-1} x dx$

5. _____

6. (4 points) Evaluate: $\int e^{2x} \sin 4x dx$

6. _____

7. (4 points) Evaluate: $\int \frac{(\ln x)^2}{x^3} dx$

7. _____

8. (4 points) Evaluate: $\int \csc^3 x dx$

8. _____

9. (5 points) Find the volume generated by rotating the region bounded by $y = e^x$, $y = e^{-x}$, and $x = 1$ by the y -axis. Drawing required.

9. _____

10. (5 points) Find the volume generated by rotating the region bounded by $y = \ln x$, $y = 0$, and $x = 2$ by each axis. Drawing required.

(a) (5 points) the x -axis.

(a) _____

(b) (5 points) the y -axis.

(b) _____