Exam 2 **Name**_____

Math 132-01 **Calculus II** **October 8, 2018**

Guidelines

- **Calculators are not allowed.**
- Read the questions carefully. You have 65 minutes; use your time wisely.
- You may leave your answers in symbolic form, like $\sqrt{3}$ or $\ln(2)$, unless they simplify further like $\sqrt{9} = 3$ or $\cos(3\pi/4) = -\sqrt{2}/2$.
- Put a box around your final answers when relevant.
- Show all steps in your solutions and make your reasoning clear. Answers with no explanation will not receive full credit, even when correct.
- Use the space provided. If necessary, write "see other side" and continue working on the back of the same page.

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1. (8 points) To be completed once exams are graded and returned. Please correct any problem with points deducted. All corrections should be completed neatly on a separate sheet of paper. Once you have finished your corrections, take your exam and corrections to the Office of Student Learning (OSL), and a tutor will check your answers and sign below. The checked solutions should be given to your instructor.

   Signature: _____
   Print Name: _____
   Date: _____

Question	Points	Score
1	8	
2	8	
3	10	
4	8	
5	10	
6	10	
7	12	
8	12	
9	12	
10	10	
Total:	100	

2. (8 points) Evaluate $\displaystyle\int_{\pi/4}^{\pi/3} \frac{1}{\cos^2 x \tan x} dx$

3. (10 points) Evaluate $\displaystyle\int 4x \sec^2(2x)\, dx$.

4. (8 points) Find the general solution of $\sqrt{x}\,\dfrac{dy}{dx} = e^{y+\sqrt{x}}$

5. (10 points) Evaluate $\displaystyle\int \frac{x^3}{x^2 - 2x - 3}\, dx$.

6. (10 points) Evaluate $\displaystyle\int \frac{2+\sin x+\cos x}{\cos^2 x}\,dx$.

7. (12 points) Evaluate $\displaystyle\int x^{3/2}(\ln x)^2\,dx$.

8. (12 points) Evaluate $\displaystyle\int \frac{x^2}{(16-x^2)^{3/2}}\,dx$

9. (12 points) Evaluate $\int \frac{z+1}{z^2(z^2+4)}\,dz$

10. (10 points) Evaluate the following integral, if it exists.

$$\int_1^\infty \frac{\ln y}{y^3}\,dy$$