

Calculus I

Name: _____

Study Guide 22

Class: _____

Due Date: _____

Score: _____

No Work \Leftrightarrow No Points

Use Pencil Only \Leftrightarrow Be Neat & Organized

1. (2 points) Find $\int 2x(x^2 + 1) dx$.

1. _____

2. (3 points) Find $\int 2x(x^2 + 1)^9 dx$.

2. _____

3. (3 points) Find $\int \frac{1}{2\sqrt{x}}(\sqrt{x} - 1) dx$.

3. _____

4. (4 points) Find $\int \frac{2}{\sqrt{x}}(\sqrt{x} - 1)^3 dx$.

4. _____

5. (3 points) Find $\int x \cos x^2 dx$.

5. _____

6. (3 points) Find $\int \frac{\sin \sqrt{x}}{\sqrt{x}} dx$.

6. _____

7. (3 points) Find $\int (2x + 1) \sec^2(x^2 + x) dx$.

7. _____

8. (3 points) Evaluate $\int \sqrt{x+1} dx$.

8. _____

9. (3 points) Evaluate $\int x\sqrt{x+1} dx$.

9. _____

10. (4 points) Evaluate $\int x^2\sqrt{x+1} dx$.

10. _____

11. (4 points) Evaluate $\int x^3\sqrt{x+1} dx$.

11. _____

12. (4 points) Evaluate: $\int \frac{2x + 1}{(x^2 + x)^3} dx$.

12. _____

13. (5 points) Evaluate $\int \frac{\sqrt{x}}{\sqrt{x}\sqrt{x+1}} dx$.

13. _____

14. (4 points) Evaluate $\int \sin x \sec^2(\cos x) dx$.

14. _____

15. (2 points) Evaluate $\int (\sec^2 x - \tan^2 x) dx$.

15. _____