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[← MC 006, section B, Fall 2019](#)

 INSTRUCTOR

5.5 Regla de la Sustitución (Homework)

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Universidad Francisco Marroquin

Current Score

QUESTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
POINTS	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/0	1/1	1/1	1/1	1/0	1/0	1/1	1/0	1/1	1/1	2/2
	✓	✓	✓	✓	✓	✓	✓	★	✓	✓	✓	★	★	✓	★	✓	✓	✓

TOTAL SCORE

19/15

126.7%

Due Date

DECEMBER 21
11:59 PM CST



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Assignment Submission & Scoring

Assignment Submission

For this assignment, you submit answers by question parts. The number of submissions remaining for each question part only changes if you submit or change the answer.

Assignment Scoring

Your last submission is used for your score.

1. **1/1 points** [Previous Answers](#) SCalcET8 5.5.001.

[My Notes](#)

[Ask Your Teacher](#)

Evaluate the integral by making the given substitution. (Use C for the constant of integration.)

$$\int \cos(6x) \, dx, \quad u = 6x$$

$\sin(6x)6+C$



2. 1/1 points Previous Answers SCalcET8 5.5.003.MI.

 My Notes

Ask Your Teacher

Evaluate the integral by making the given substitution. (Use C for the constant of integration.)

$$\int x^2 \sqrt{x^3 + 13} \, dx, \quad u = x^3 + 13$$

29(x³+13)^(3/2)+C

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3. 1/1 points Previous Answers SCalcET8 5.5.004.

 My Notes

Ask Your Teacher

Evaluate the integral by making the given substitution. (Use C for the constant of integration.)

$$\int \sin^3(\theta) \cos(\theta) \, d\theta, \quad u = \sin(\theta)$$

sin⁴(θ)+C

4. 1/1 points Previous Answers SCalcET8 5.5.005.

 My Notes

Ask Your Teacher

Evaluate the integral by making the given substitution. (Use C for the constant of integration. Remember to use absolute values where appropriate.)

$$\int \frac{x^3}{x^4 - 2} dx, \quad u = x^4 - 2$$

 $\ln|x^4 - 2| + C$



5. 1/1 points Previous Answers SCalcET8 5.5.009.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int (4 - 4x)^7 dx$$

 $-\frac{(4 - 4x)^8}{8} + C$



6. 1/1 points Previous Answers SCalcET8 5.5.010.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \sin(t) \sqrt{1 + \cos(t)} \, dt$$

-2(1+cos(t))(32)3+C



7. 1/1 points Previous Answers SCalcET8 5.5.017.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \frac{e^u}{(1 - e^u)^2} \, du$$

11-eu+C



8. **1/0 points** [Previous Answers](#) SCalcET8 5.5.019.[My Notes](#)[Ask Your Teacher](#)Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \frac{a + bx^7}{\sqrt{8ax + bx^8}} dx$$

 $\sqrt{8ax+bx^8}+C$

9. **1/1 points** [Previous Answers](#) SCalcET8 5.5.021.MI.[My Notes](#)[Ask Your Teacher](#)Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \frac{(\ln(x))^{16}}{x} dx$$

 $\ln^{17}(x)+C$



10. 1/1 points Previous Answers SCalcET8 5.5.023.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \sec^2(\theta) \tan^3(\theta) d\theta$$

  $\tan^4(\theta) + C$ 

11. 1/1 points Previous Answers SCalcET8 5.5.025.MI.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int e^x \sqrt{7 + e^x} dx$$

  $\frac{2}{3}(7 + e^x)^{3/2} + C$ 

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12.

1/0 points

[Previous Answers](#)

SCalcET8 5.5.026.

[My Notes](#)[Ask Your Teacher](#)

Evaluate the indefinite integral. (Remember to use absolute values where appropriate. Use C for the constant of integration.)

$$\int \frac{dx}{tx + g} \quad (t \neq 0)$$

 $1t \ln|tx+g| + C$



13.

1/0 points

[Previous Answers](#)

SCalcET8 5.5.034.MI.

[My Notes](#)[Ask Your Teacher](#)

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \frac{\cos(\pi/x^{11})}{x^{12}} dx$$

 $-\sin(\pi x^{11}) \frac{1}{11} + C$



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14. 1/1 points Previous Answers SCalcET8 5.5.035.

My Notes

Ask Your Teacher

Evaluate the indefinite integral.

$$\int \sqrt[30]{\cot(x)} \csc^2(x) dx$$

- ☐ $\frac{30}{31} - (\csc(x))^{31/30} + C$
- ☐ $\frac{30}{31} - \cot^2(x) + C$
- ☒ $\frac{30}{31} - (\cot(x))^{31/30} + C$
- ☐ $\frac{30}{31} - \csc^2(x) + C$
- ☐ $- (\csc(x))^{30/31} + C$



15. 1/0 points Previous Answers SCalcET8 5.5.039.

My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \frac{\sin(2x)}{28 + \cos^2(x)} dx$$

 $- \ln|57 + \cos(2x)| + C$



16. 1/1 points Previous Answers SCalcET8 5.5.041.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Remember to use absolute values where appropriate. Use C for the constant of integration.)

$$\int \cot(18x) \, dx$$

118ln|sin(18x)|+C



17. 1/1 points Previous Answers SCalcET8 5.5.044.MI.

 My Notes

Ask Your Teacher

Evaluate the indefinite integral. (Use C for the constant of integration.)

$$\int \frac{x^5}{1+x^{12}} \, dx$$

16tan⁻¹(x⁶)+C


18.

2/2 points

[Previous Answers](#)

SCalcET8 5.5.050.

[My Notes](#)[Ask Your Teacher](#)

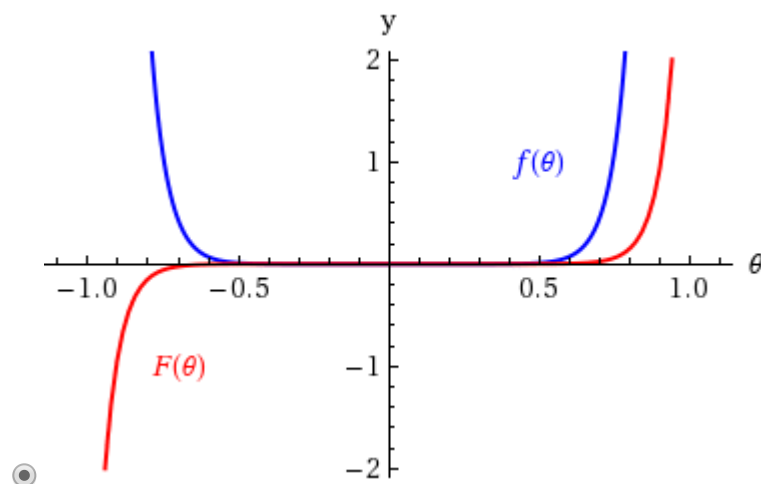
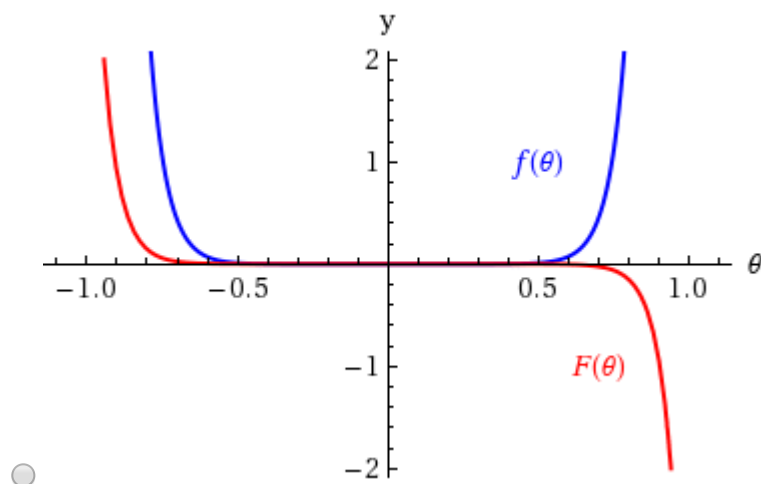
Evaluate the indefinite integral. (Use C for the constant of integration.)

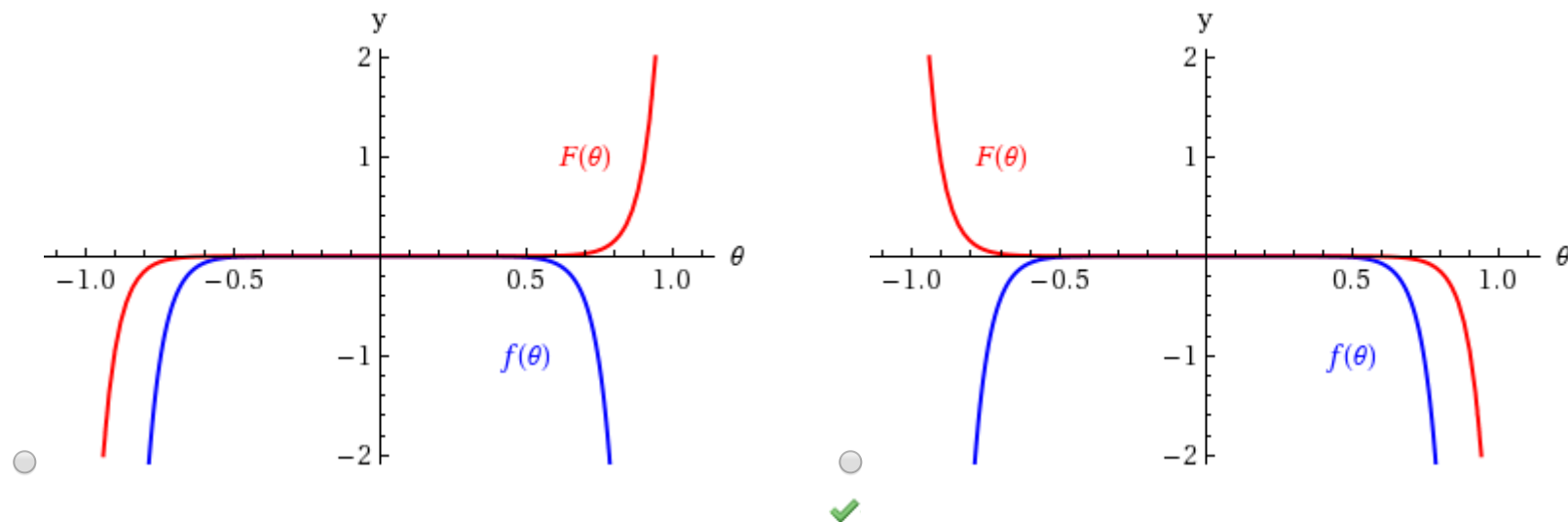
$$\int \tan^8(\theta) \sec^2(\theta) d\theta$$

$$\tan^9(\theta)9+C$$



Illustrate and check that your answer is reasonable by graphing both the function and its antiderivative (take $C = 0$).



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