WebAssign

Hw 15 (7.6, 7.7): Integration by Table and Approx. (Homework)

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MA 162 Spring 2012, section 321, Spring 2012

Instructor: Jonathan Montano

Current Score : 20 / 20 **Due :** Tuesday, February 21 2012 11:55 PM EST

1. 2.5/2.5 points | Previous Answers

SCalcET7 7.6.003.

Use the indicated entry in the <u>Table of Integrals</u> to evaluate the integral.

$$\int_{1}^{2} 15\sqrt{4x^2 - 3} \ dx; \text{ entry } 39$$



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2. 2.5/2.5 points | Previous Answers

SCalcET7 7.6.007.

Use the <u>Table of Integrals</u> to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

$$\int \frac{\cos x}{\sin^2 x - 49} \, dx$$



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3. 2.5/2.5 points | Previous Answers

SCalcET7 7.6.008.

Use the <u>Table of Integrals</u> to evaluate the integral.

$$\int \frac{3 \ln(9 + \sqrt{x})}{\sqrt{x}} dx$$

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4. 2.5/2.5 points | Previous Answers

SCalcET7 7.6.013.

Use the <u>Table of Integrals</u> to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

$$\int \frac{\tan^3(3/z)}{z^2} dz$$

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5. 2.5/2.5 points | Previous Answers

SCalcET7 7.6.018.

Use the <u>Table of Integrals</u> to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

$$\int \frac{dx}{4x^3 - 7x^2}$$

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6. 2.5/2.5 points | Previous Answers

SCalcET7 7.6.021.

Use the <u>Table of Integrals</u> to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

$$\int \frac{e^{3x}}{7 - e^{6x}} dx$$

$$\frac{1}{3} \cdot \frac{e^{3x}}{\ln \frac{3x}{2}} + C$$

$$\frac{1}{8} - \frac{e^3 x}{\ln \frac{x}{3}} + C$$

$$\frac{1}{2} - \frac{e^3x}{\ln \frac{1}{x^2}} + C$$

$$\frac{1}{\sqrt[3]{-\frac{e^{3x}}{\ln \frac{1}{\sqrt{1+x^2}}}}} + C$$

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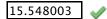
7. 2.5/2.5 points | Previous Answers

SCalcET7 7.7.011.

Use the Trapezoidal Rule, the Midpoint Rule, and Simpson's Rule to approximate the given integral with the specified value of n. (Round your answers to six decimal places.)

$$\int_{1}^{4} 6\sqrt{\ln x} \ dx, \ n = 6$$

(a) the Trapezoidal Rule



(b) the Midpoint Rule



(c) Simpson's Rule



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8. 2.5/2.5 points | Previous Answers

SCalcET7 7.7.013.

Use the Trapezoidal Rule, the Midpoint Rule, and Simpson's Rule to approximate the given integral with the specified value of n. (Round your answers to six decimal places.)

$$\int_0^4 e^{4\sqrt{t}} \sin 3t \, dt, \quad n = 8$$

(a) the Trapezoidal Rule

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(b) the Midpoint Rule

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(c) Simpson's Rule



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