

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

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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 [Table of Integrals](#) to evaluate the integral.

$$\int_1^2 15 \sqrt{4x^2 - 3} \, dx; \quad \text{entry 39}$$

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SCalcET7 7.6.007.

Use the [Table of Integrals](#) to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

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

+ C

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SCalcET7 7.6.008.

Use the [Table of Integrals](#) to evaluate the integral.

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

+ C

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SCalcET7 7.6.013.

Use the [Table of Integrals](#) to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

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

✓ + C

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5. 2.5/2.5 points | [Previous Answers](#)

SCalcET7 7.6.018.

Use the [Table of Integrals](#) to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

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

✓ + C

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6. 2.5/2.5 points | [Previous Answers](#)

SCalcET7 7.6.021.

Use the [Table of Integrals](#) to evaluate the integral. (Remember to use $\ln |u|$ where appropriate.)

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

☐ $\frac{1}{7} - \ln \left| \frac{e^{3x} - 7}{e^{3x} + 7} \right| + C$
☐ $\frac{1}{7} - \ln \left| \frac{e^{3x} - 7}{e^{3x} - 7} \right| + C$
☒ $\frac{1}{7} - \ln \left| \frac{e^{3x} + 7}{e^{3x} - 7} \right| + C$
☐ $\frac{1}{7} - \ln \left| \frac{e^{3x} + 7}{e^{3x} + 7} \right| + C$
☐ $\frac{1}{7} - \ln \left| \frac{e^{3x} - 7}{e^{3x} + 7} \right| + C$

✓

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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.)

$$\int_1^4 6\sqrt{\ln x} \, dx, \quad n = 6$$

(a) the Trapezoidal Rule

 ✓

(b) the Midpoint Rule

 ✓

(c) Simpson's Rule

 ✓

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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

 ✓

(b) the Midpoint Rule

 ✓

(c) Simpson's Rule

 ✓

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