Web**Assign**
Hw 20 (15.3): Double Integrals in General Regions (Homework)

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MA 261 Fall 2012, section 121, Fall 2012
Instructor: David Daniels

Current Score : 20 / 20   **Due :** Tuesday, October 16 2012 11:00 PM EDT

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1. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.001.

Evaluate the iterated integral.

$$\int_0^4 \int_0^{\sqrt{y}} 3xy^2 \, dx \, dy$$

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2. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.007.

Evaluate the double integral.

$$\iint_D 9y^2 \, dA, \qquad D = \{(x, y) \mid -1 \le y \le 1, \, -y - 2 \le x \le y\}$$

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3. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.008.

Evaluate the double integral.

$$\iint_D \frac{8y}{7x^5 + 1} \, dA, \quad D = \{(x, y) \mid 0 \le x \le 1, \ 0 \le y \le x^2\}$$

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4. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.017.MI.

Evaluate the double integral.

$$\iint_D 7x \cos y \, dA, \ D \text{ is bounded by } y = 0, \ y = x^2, \ x = 3$$

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5. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.023.

Find the volume of the given solid.

Under the plane $x - 2y + z = 6$ and above the region bounded by $x + y = 1$ and $x^2 + y = 1$

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6. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.026.

Find the volume of the given solid.

Enclosed by the paraboloid $z = 3x^2 + 2y^2$ and the planes $x = 0, y = 4, y = x, z = 0$

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7. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.027.

Find the volume of the given solid.

Bounded by the coordinate planes and the plane $7x + 4y + z = 28$

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8. 2.22/2.22 points | Previous Answers   SCalcET7 15.3.049.

Evaluate the integral by reversing the order of integration.

$$\int_0^2 \int_{3y}^6 5e^{x^2} \, dx \, dy$$

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9. 2.24/2.24 points | Previous Answers   SCalcET7 15.3.059.

Find the average value of *f* over region *D*.

$f(x, y) = 5xy$, *D* is the triangle with vertices (0, 0), (1, 0), and (1, 4).

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