WebAssign
Hw 27 (16.2): Line Integrals (Homework)

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

Current Score : 20 / 20 **Due :** Tuesday, October 30 2012 11:00 PM EDT

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1. 3.33/3.33 points | Previous Answers SCalcET7 16.2.001.

Evaluate the line integral, where C is the given curve.

$$\int_C y^3\,ds, \quad C\colon x = t^3, \quad y = t, \quad 0 \le t \le 5$$

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2. 3.33/3.33 points | Previous Answers SCalcET7 16.2.004.

Evaluate the line integral, where C is the given curve.

$$\int_C x \sin y\,ds, \; C \text{ is the line segment from } (0, 2) \text{ to } (4, 5)$$

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3. 3.33/3.33 points | Previous Answers SCalcET7 16.2.007.

Evaluate the line integral, where C is the given curve.

$\int_C (x + 6y)\,dx + x^2\,dy$, C consists of line segments from (0, 0) to (6, 1) and from (6, 1) to (7, 0)

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4. 3.33/3.33 points | Previous Answers SCalcET7 16.2.010.

Evaluate the line integral, where C is the given curve.

$\int_C xyz^2\,ds$, C is the line segment from $(-2, 6, 0)$ to $(0, 7, 1)$

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5. 3.33/3.33 points | Previous Answers SCalcET7 16.2.011.

Evaluate the line integral, where C is the given curve.

$\int_C xe^{yz}\,ds$, C is the line segment from (0, 0, 0) to (3, 2, 4)

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6. 3.35/3.35 points | Previous Answers SCalcET7 16.2.036.

Find the mass and center of mass of a wire in the shape of the helix $x = t$, $y = 2\cos t$, $z = 2\sin t$, $0 \le t \le 2\pi$, if the density at any point is equal to the square of the distance from the origin.

mass

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center of mass $(\bar{x}, \bar{y}, \bar{z}) = ($

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