

**WebAssign****Hw 17 (8.1, 8.2): Arc Length and Surf. Revolution (Homework)**

Yinglai Wang

MA 162 Spring 2012, section 321, Spring 2012

Instructor: Jonathan Montano

**Current Score :** 20 / 20**Due :** Thursday, February 23 2012 11:55 PM EST**1.** 2/2 points | [Previous Answers](#)

SCalcET7 8.1.007.

Find the exact length of the curve.

$$y = 3 + 4x^{3/2}, \quad 0 \leq x \leq 1$$

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SCalcET7 8.1.008.MI.

Find the exact length of the curve.

$$y^2 = 4(x + 5)^3, \quad 0 \leq x \leq 1, \quad y > 0$$

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SCalcET7 8.1.011.

Find the exact length of the curve.

$$x = \frac{1}{3}\sqrt{y}(y - 3), \quad 16 \leq y \leq 25$$

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SCalcET7 8.1.013.

Find the exact length of the curve.

$$y = \ln(\sec x), \quad 0 \leq x \leq \pi/4$$



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SCalcET7 8.1.017.

Find the exact length of the curve.

$$y = \ln(1 - x^2), \quad 0 \leq x \leq \frac{1}{5}$$

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SCalcET7 8.2.005.

Find the exact area of the surface obtained by rotating the curve about the x-axis.

$$y = x^3, \quad 0 \leq x \leq 4$$

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SCalcET7 8.2.006.

Find the exact area of the surface obtained by rotating the curve about the x-axis.

$$9x = y^2 + 36, \quad 4 \leq x \leq 8$$

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SCalcET7 8.2.009.

Find the exact area of the surface obtained by rotating the curve about the x-axis.

$$y = \sin \frac{\pi x}{5}, \quad 0 \leq x \leq 5$$

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SCalcET7 8.2.011.

Find the exact area of the surface obtained by rotating the curve about the x-axis.

$$x = \frac{1}{3}(y^2 + 2)^{3/2}, \quad 3 \leq y \leq 5$$



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SCalcET7 8.2.014.

The given curve is rotated about the y-axis. Find the area of the resulting surface.

$$y = 3 - x^2, \quad 0 \leq x \leq 2$$



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