Web**Assign**
Hw 7 (6.3): Volumes by Cylindrical Shells (Homework)

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MA 162 Spring 2012, section 321, Spring 2012
Instructor: Jonathan Montano

Current Score : 20 / 20   **Due :** Thursday, January 26 2012 11:55 PM EST

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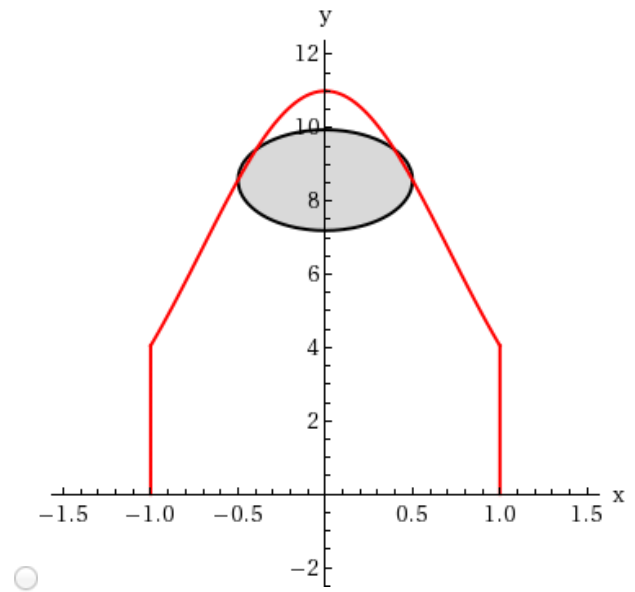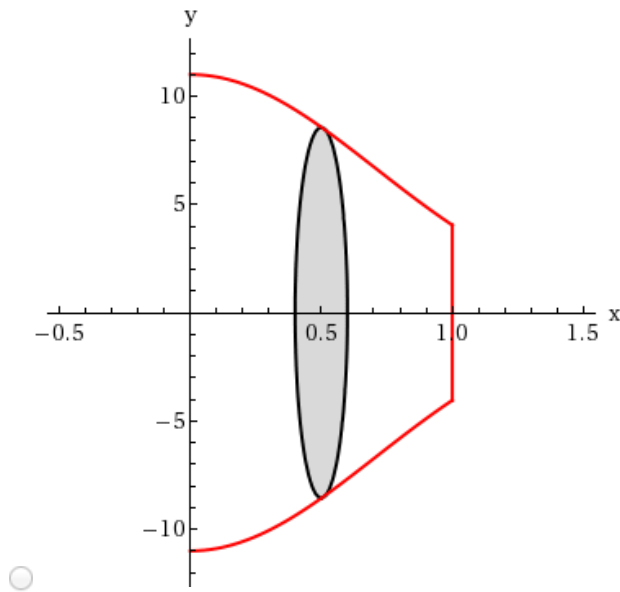**1.** 3.33/3.33 points | Previous Answers   SCalcET7 6.3.005.MI.
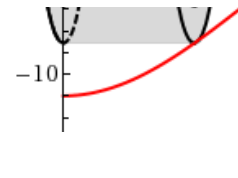
Use the method of cylindrical shells to find the volume V generated by rotating the region bounded by the given curves about the y-axis.

$$y = 11e^{-x^2}, \quad y = 0, \quad x = 0, \quad x = 1$$

$V =$ ✔

Sketch the region and a typical shell.

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2. 3.33/3.33 points | Previous Answers   SCalcET7 6.3.007.
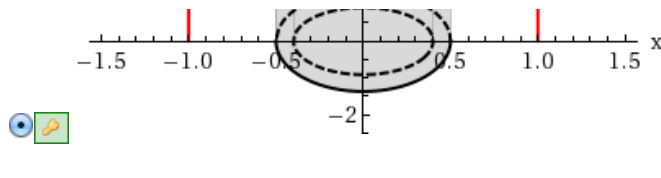
Use the method of cylindrical shells to find the volume generated by rotating the region bounded by the given curves about the y-axis.

$$y = 3x^2, \quad y = 18x - 6x^2$$

✔

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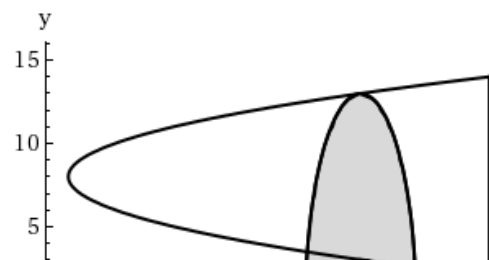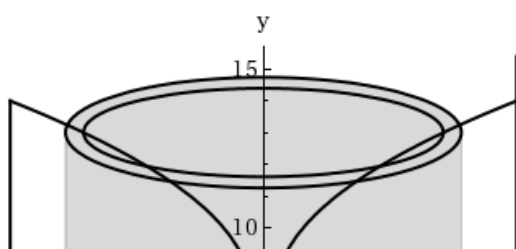
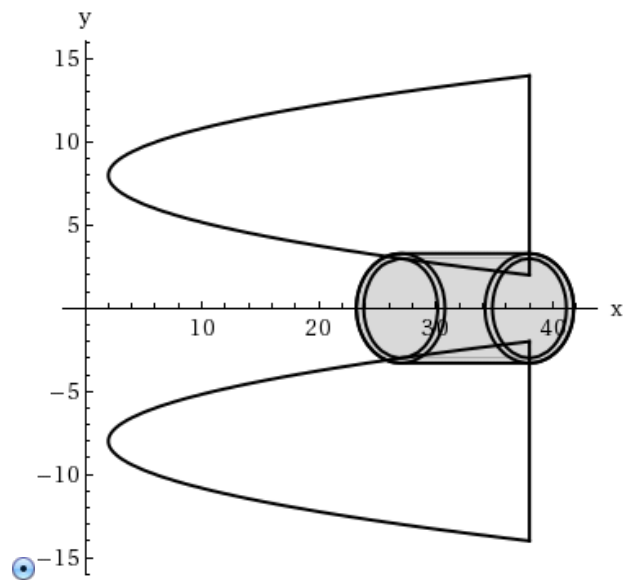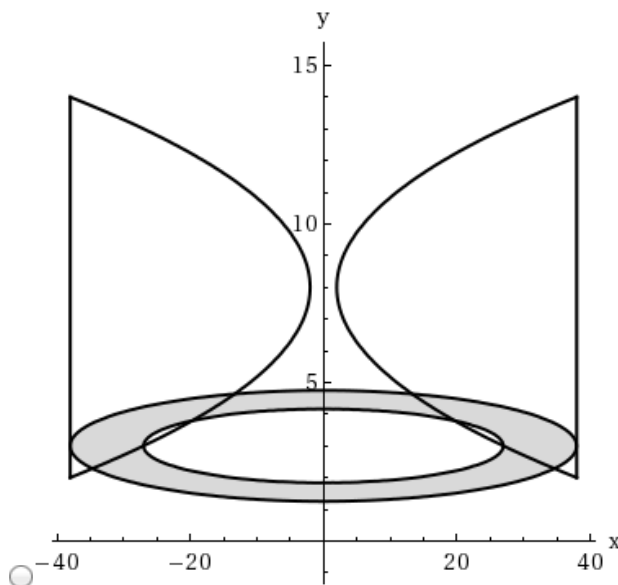**3.** 3.33/3.33 points | Previous Answers   SCalcET7 6.3.013.
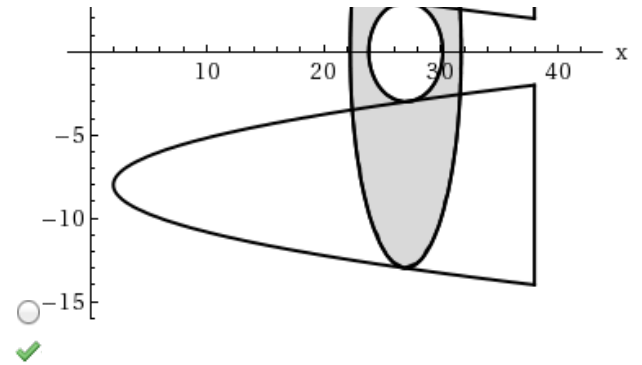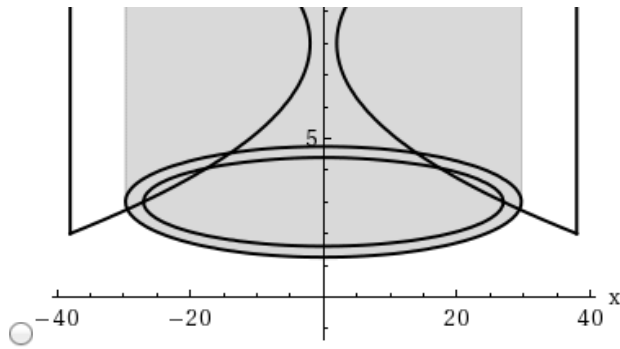
Use the method of cylindrical shells to find the volume V of the solid obtained by rotating the region bounded by the given curves about the x-axis.

$$x = 2 + (y - 8)^2, \quad x = 38$$

$V =$ ✔

Sketch the region and a typical shell.

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4. 3.33/3.33 points | Previous Answers   SCalcET7 6.3.018.

Use the method of cylindrical shells to find the volume V generated by rotating the region bounded by the given curves about the specified axis.

$y = 32 - x^2$, $y = x^2$;   about $x = 4$

$V =$ ✔

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5. 3.33/3.33 points | Previous Answers   SCalcET7 6.3.037.

The region bounded by the given curves is rotated about the specified axis. Find the volume V of the resulting solid by any method.

$y = -x^2 + 23x - 132$, $y = 0$; about the y−axis

$V =$ ✔

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6. 3.35/3.35 points | Previous Answers   SCalcET7 6.3.047.

Use cylindrical shells to find the volume V of the solid.

A right circular cone with height $4h$ and base radius $3r$

$V =$ ✔

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