

WebAssign  
**HW 6.2 (Homework)**

NICK Martinez  
Math 266 Section 2116, section 21168, Fall 2018  
Instructor: Yoon Yun

**Current Score** : - / 20      **Due** : Sunday, September 2 2018 11:59 PM PDT

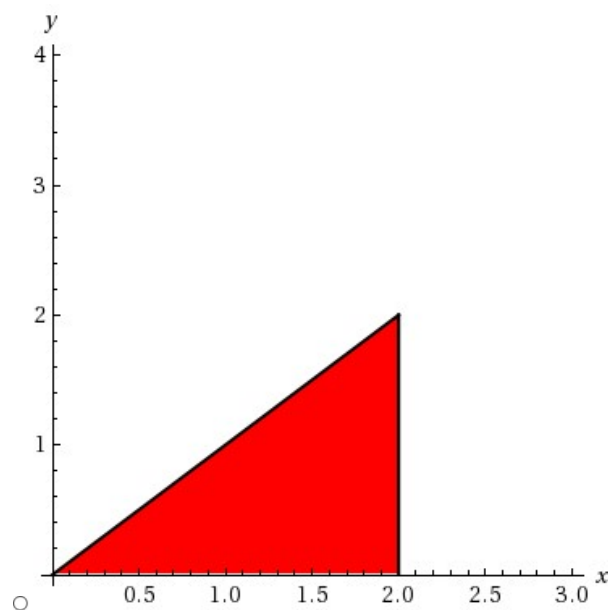
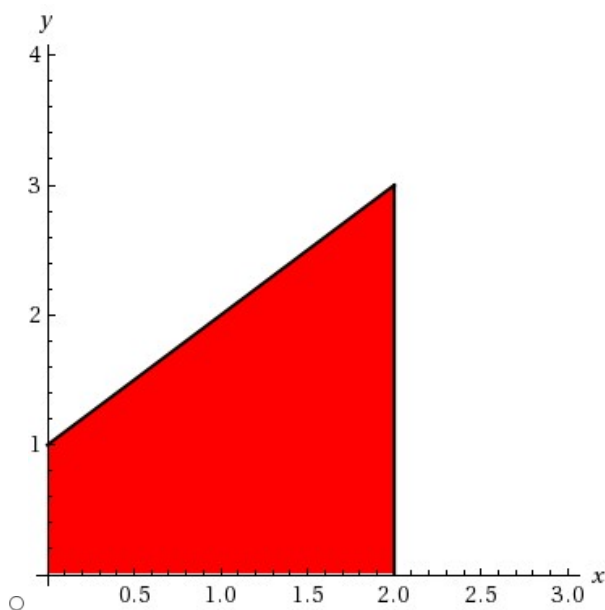
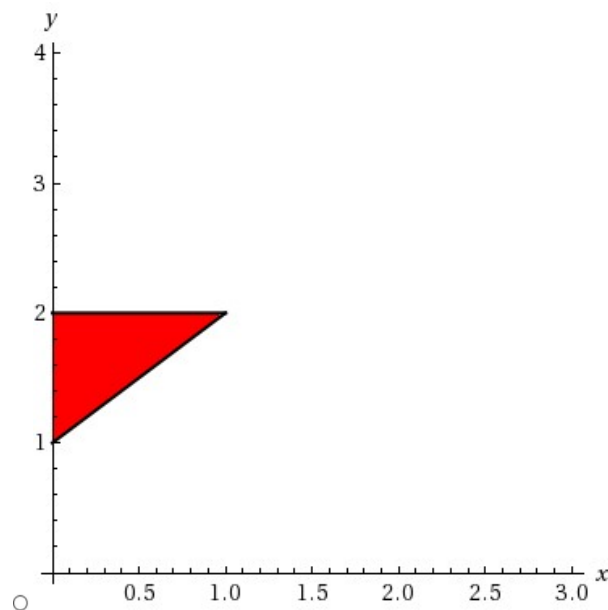
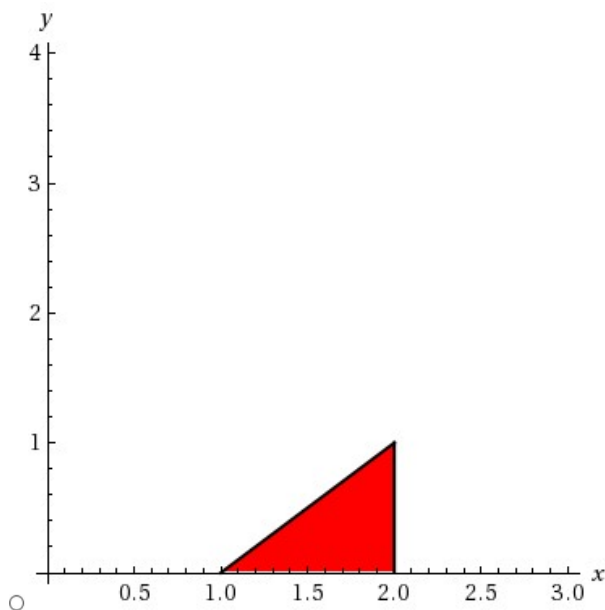
1. -/1.81 pointsSCalcET8 6.2.001.

Find the volume  $V$  of the solid obtained by rotating the region bounded by the given curves about the specified line.

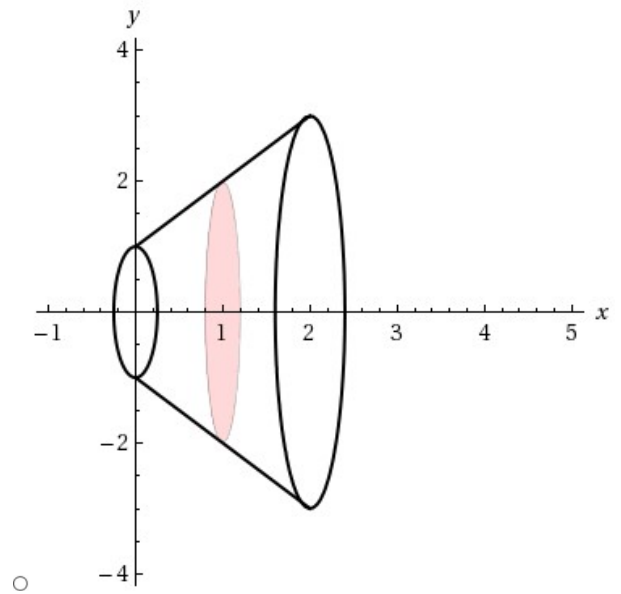
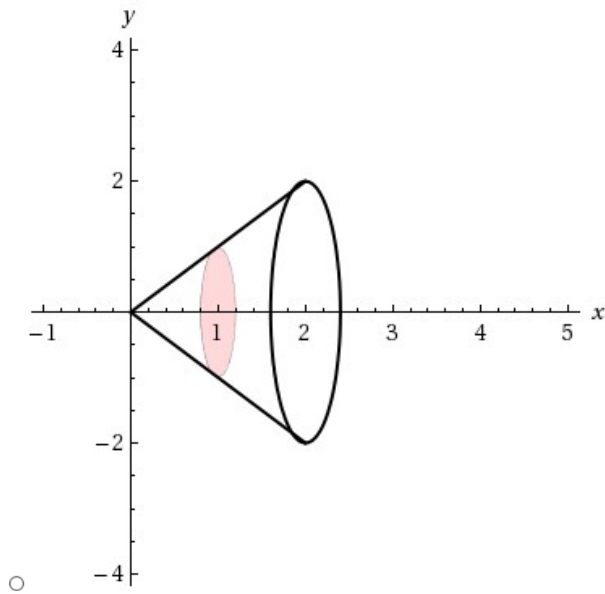
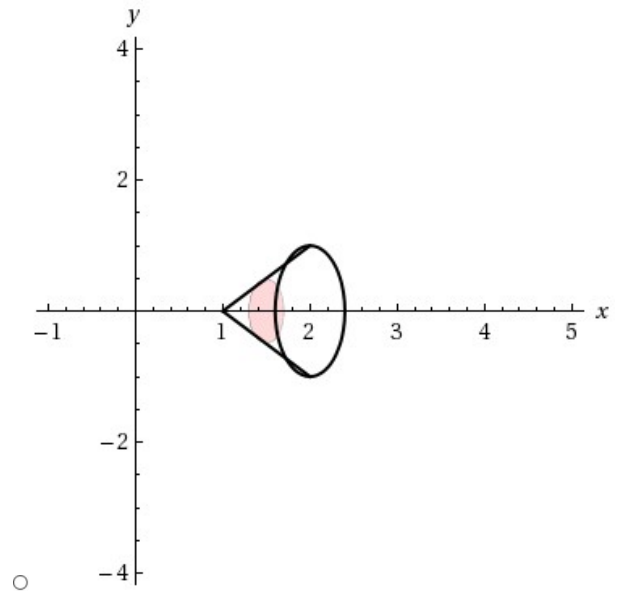
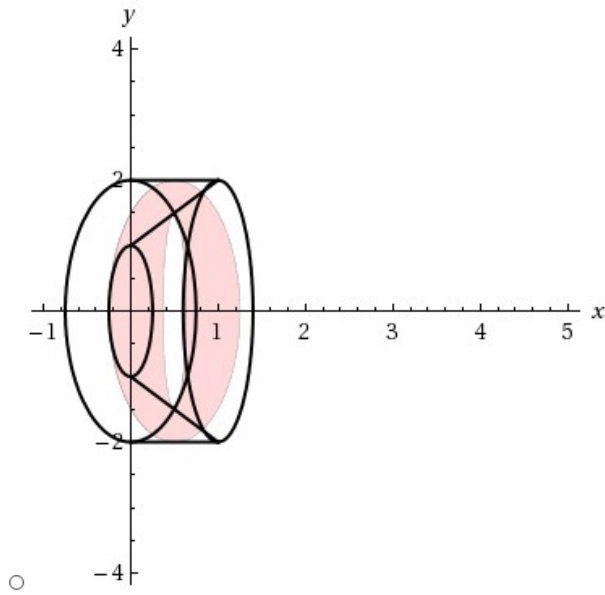
$$y = x + 1, y = 0, x = 0, x = 2; \text{ about the } x\text{-axis}$$

 $V =$   

Sketch the region.



Sketch the solid, and a typical disk or washer.

**Need Help?**[Read It](#)[Talk to a Tutor](#)

2. -/1.81 pointsSCalcET8 6.2.005.

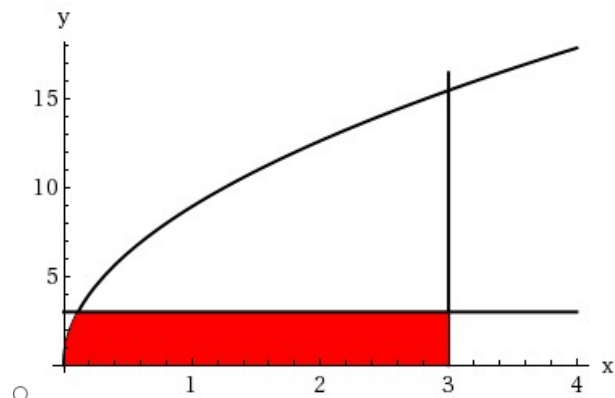
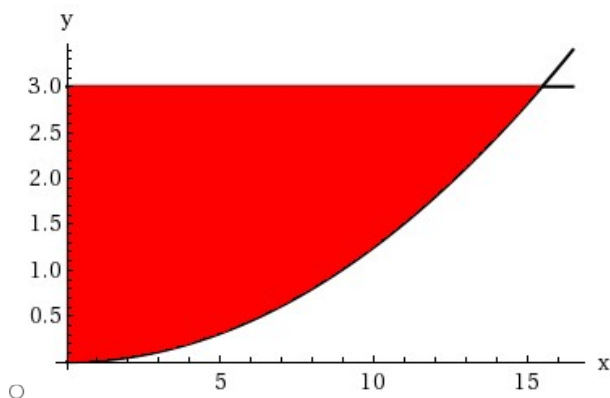
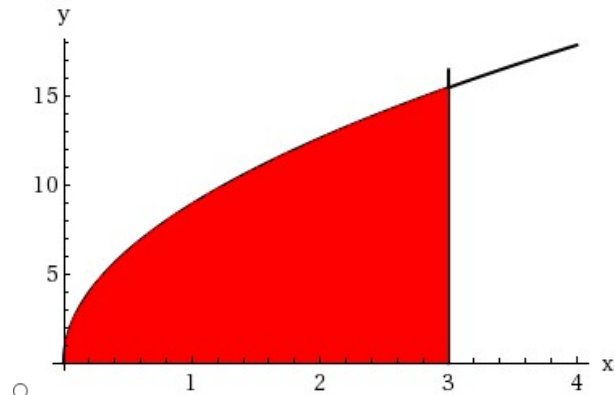
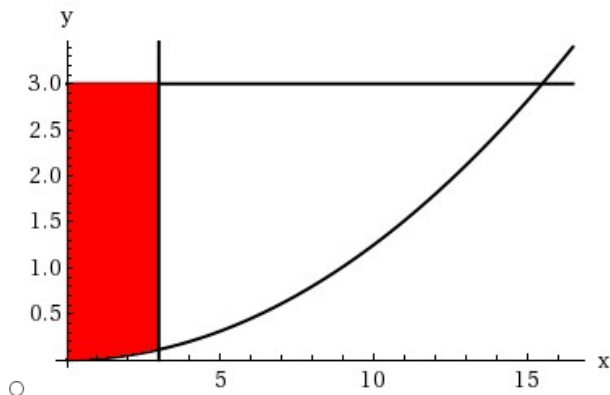
Find the volume  $V$  of the solid obtained by rotating the region bounded by the given curves about the specified line.

$$x = 4\sqrt{5y}, \quad x = 0, \quad y = 3; \quad \text{about the } y\text{-axis}$$

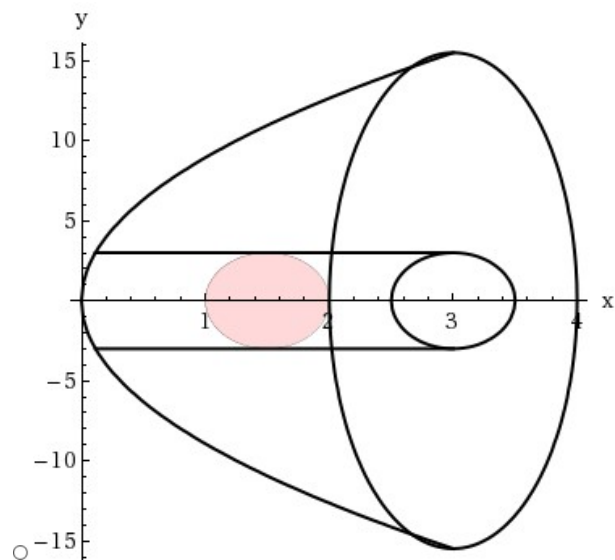
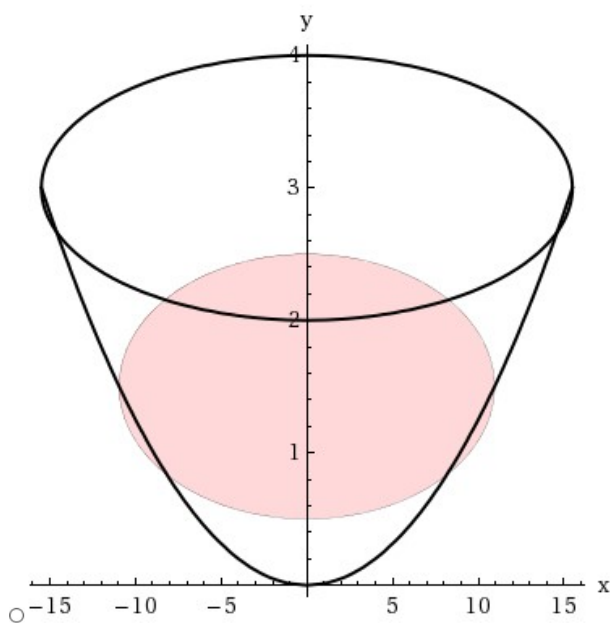
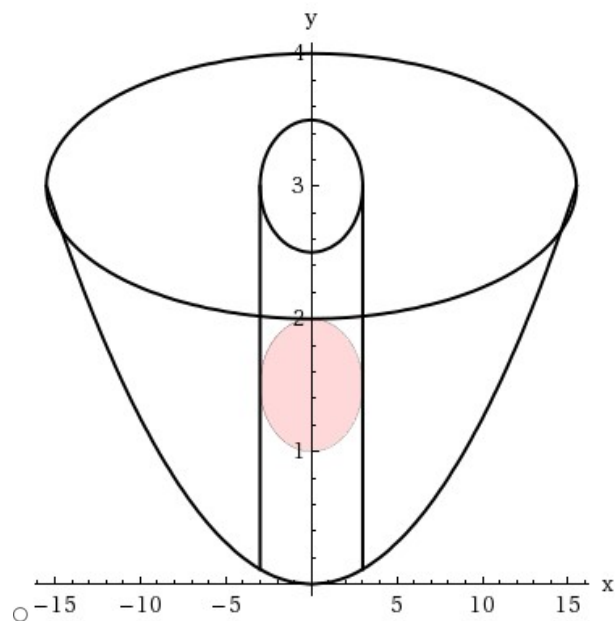
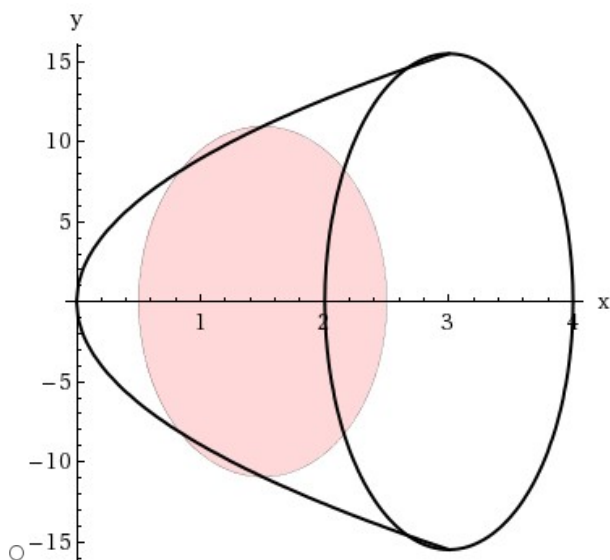
 $V =$ 



Sketch the region.



Sketch the solid, and a typical disk or washer.



Need Help?

Read It

Watch It

Talk to a Tutor

3. -/1.81 pointsSCalcET8 6.2.007.MI.SA.

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

**Tutorial Exercise**

Find the volume  $V$  of the solid obtained by rotating the region bounded by the given curves about the specified line.

$$y = 8x^6, \quad y = 8x, \quad x \geq 0; \quad \text{about the } x\text{-axis}$$

Need Help?

Read It

Talk to a Tutor

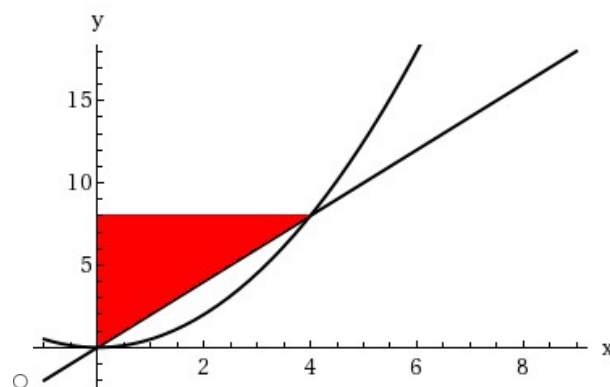
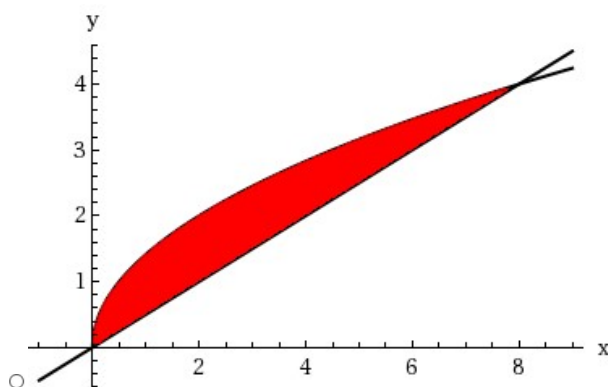
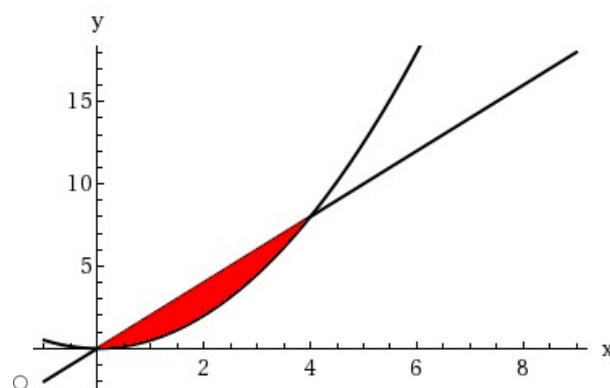
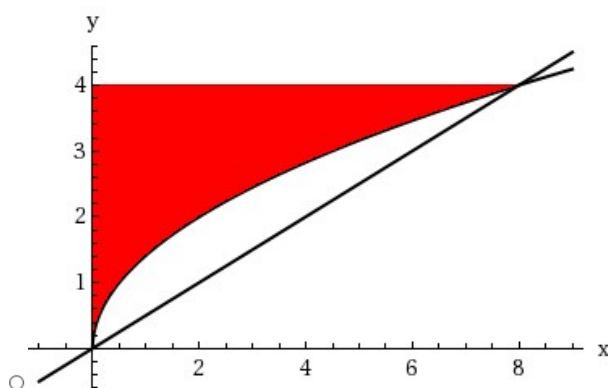
4. -/1.81 pointsSCalcET8 6.2.009.

Find the volume  $V$  of the solid obtained by rotating the region bounded by the given curves about the specified line.

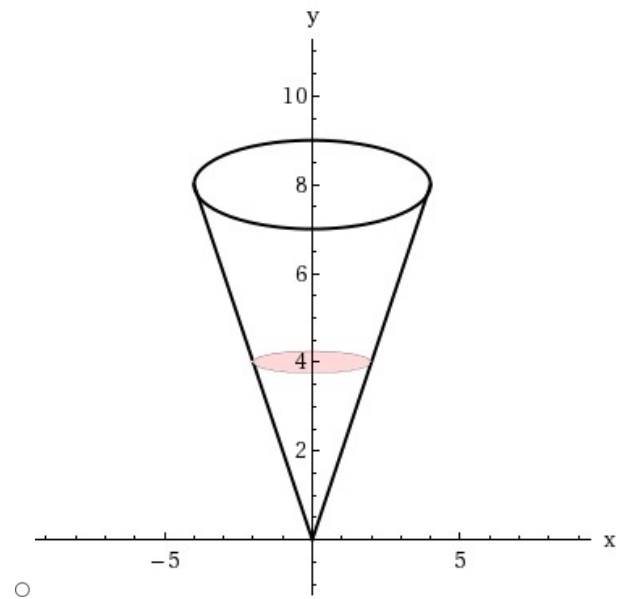
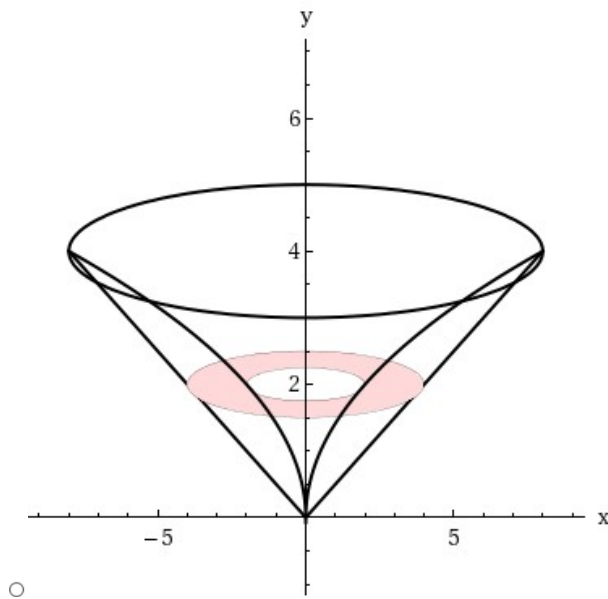
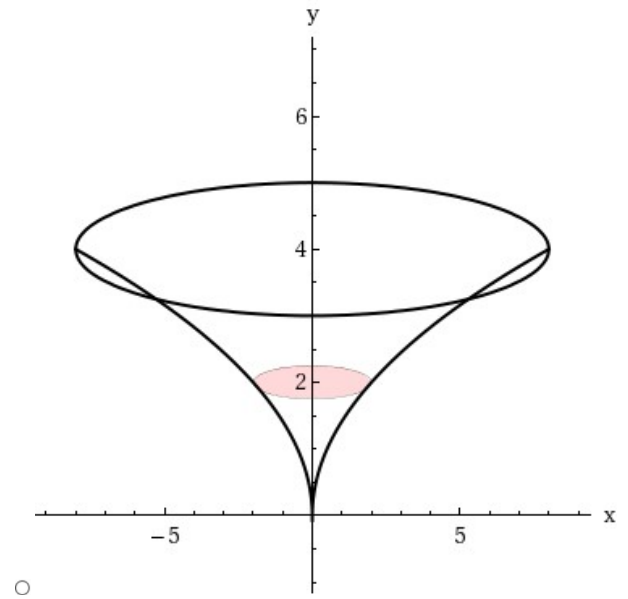
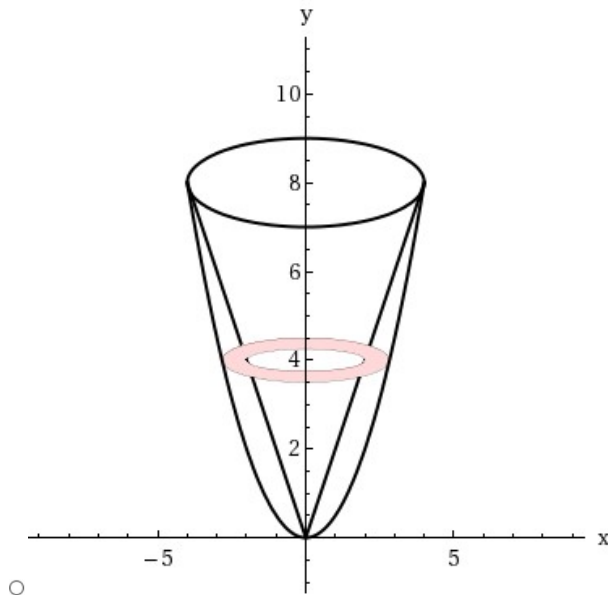
$$y^2 = 2x, x = 2y; \quad \text{about the } y\text{-axis}$$

 $V =$ 

Sketch the region.



Sketch the solid, and a typical disk or washer.

**Need Help?**[Read It](#)[Watch It](#)[Talk to a Tutor](#)

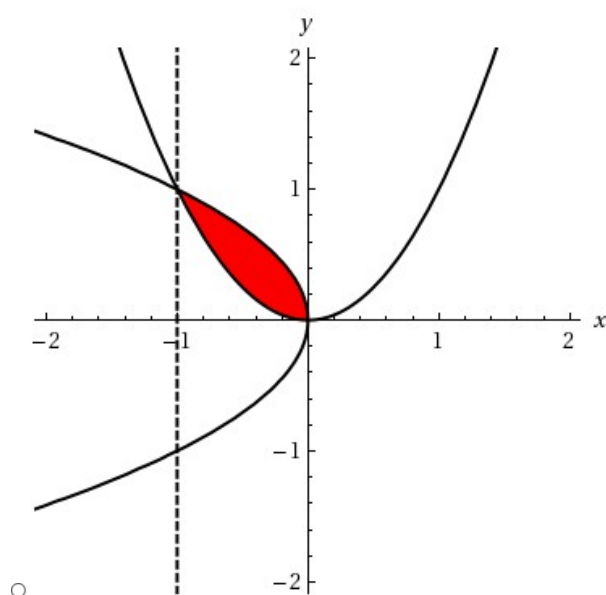
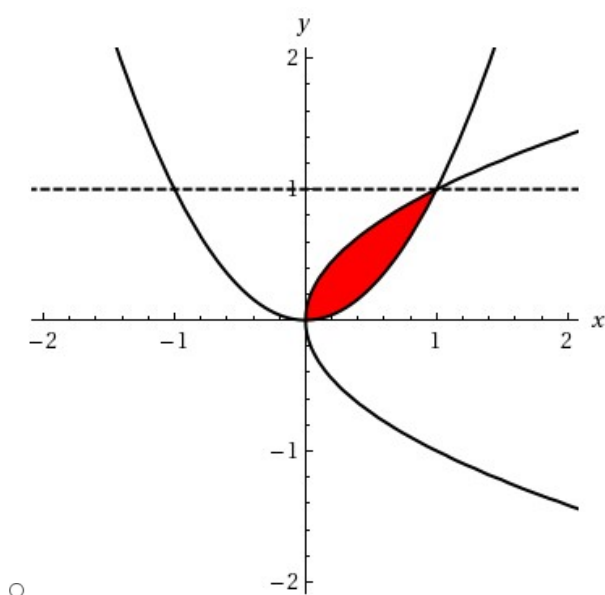
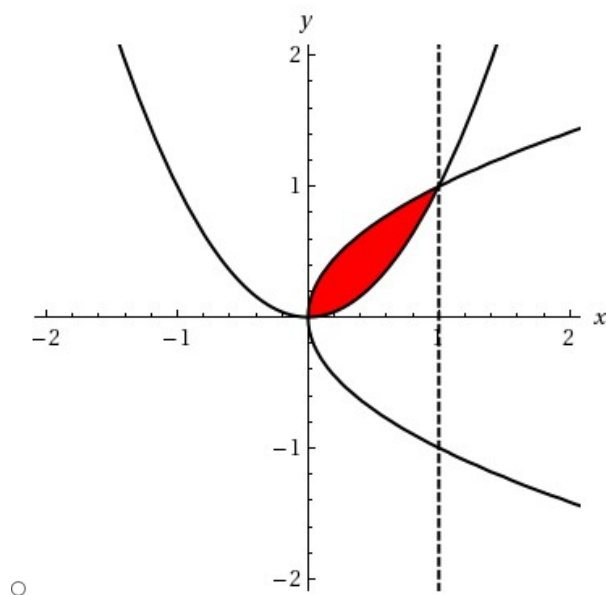
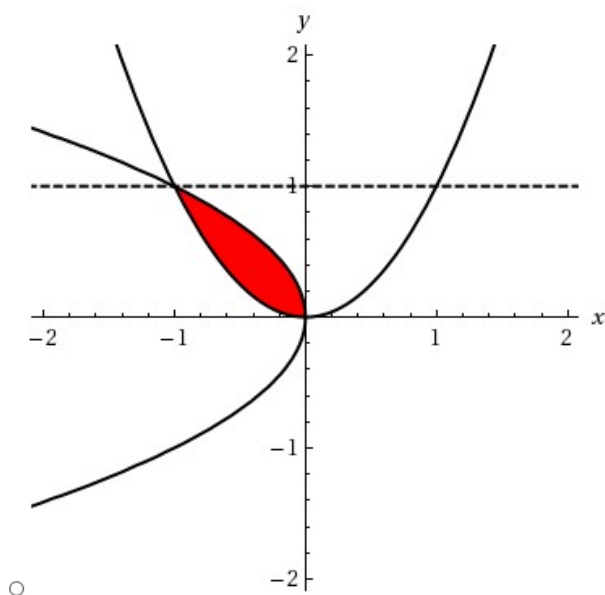
5. -/1.81 pointsSCalcET8 6.2.011.

Find the volume  $V$  of the solid obtained by rotating the region bounded by the given curves about the specified line.

$$y = x^2, \quad x = y^2; \quad \text{about } y = 1$$

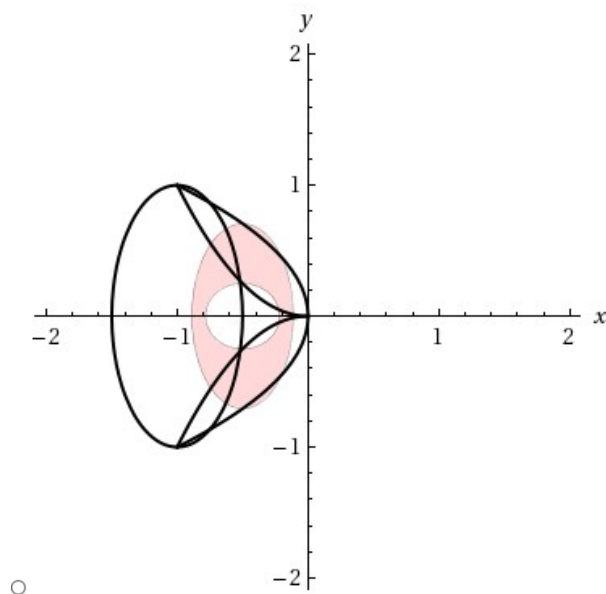
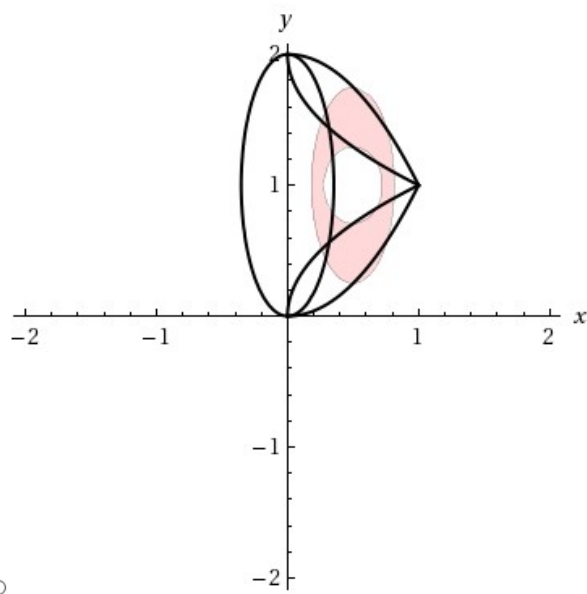
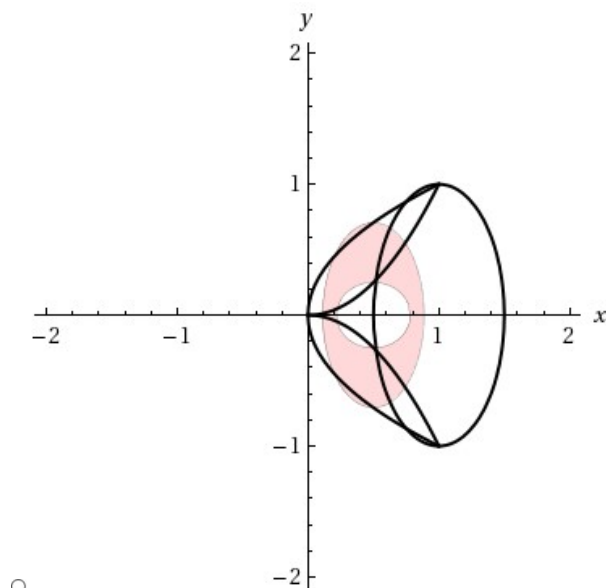
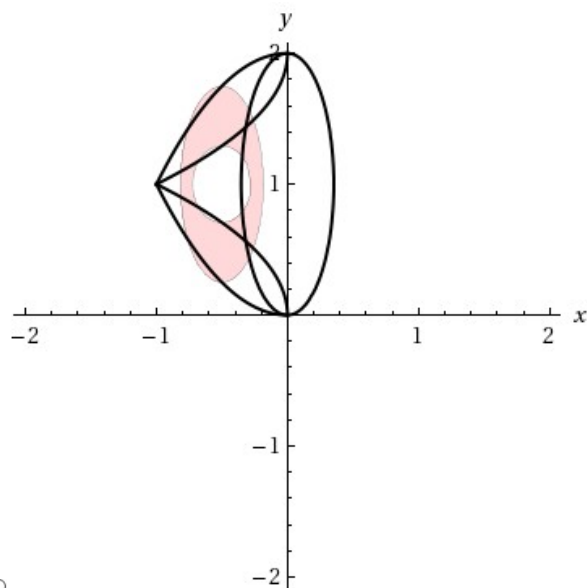
 $V =$ 
  


Sketch the region.



Sketch the solid, and a typical disk or washer.





Need Help?

Read It

Talk to a Tutor

6. -/1.81 pointsSCalcET8 6.2.031.

Set up an integral for the volume of the solid obtained by rotating the region bounded by the given curves about the specified line. Then use your calculator to evaluate the integral correct to five decimal places.

$$y = e^{-x^2}, y = 0, x = -2, x = 2$$

(a) About the x-axis

(b) About  $y = -1$ 


Need Help?

Read It

Watch It

Talk to a Tutor

7. -/1.81 pointsSCalcET8 6.2.033.

Set up an integral for the volume of the solid obtained by rotating the region bounded by the given curves about the specified line. Then use your calculator to evaluate the integral correct to five decimal places.

$$x^2 + 4y^2 = 4$$

(a) About  $y = 2$

(b) About  $x = 2$

Need Help?

Read It

Watch It

Talk to a Tutor

8. -/1.81 pointsSCalcET8 6.2.041.

The integral represents the volume of a solid. Describe the solid.

$$\pi \int_0^1 (y^8 - y^{14}) dy$$

- ☐ The integral describes the volume of the solid obtained by rotating the region  $\mathcal{R} = \{(x, y) \mid 0 \leq y \leq 1, y^7 \leq x \leq y^4\}$  of the  $xy$ -plane about the  $x$ -axis.
- ☐ The integral describes the volume of the solid obtained by rotating the region  $\mathcal{R} = \{(x, y) \mid 0 \leq y \leq 1, y^4 \leq x \leq y^7\}$  of the  $xy$ -plane about the  $y$ -axis.
- ☐ The integral describes the volume of the solid obtained by rotating the region  $\mathcal{R} = \{(x, y) \mid 0 \leq y \leq 1, y^8 \leq x \leq y^{14}\}$  of the  $xy$ -plane about the  $y$ -axis.
- ☐ The integral describes the volume of the solid obtained by rotating the region  $\mathcal{R} = \{(x, y) \mid 0 \leq y \leq 1, y^4 \leq x \leq y^7\}$  of the  $xy$ -plane about the  $x$ -axis.
- ☐ The integral describes the volume of the solid obtained by rotating the region  $\mathcal{R} = \{(x, y) \mid 0 \leq y \leq 1, y^7 \leq x \leq y^4\}$  of the  $xy$ -plane about the  $y$ -axis.

Need Help?

Read It

Watch It

Talk to a Tutor

9. -/1.81 pointsSCalcET8 6.2.047.MI.

Find the volume  $V$  of the described solid  $S$ .

A right circular cone with height  $3h$  and base radius  $5r$

$V =$



Need Help?

Read It

Watch It

Master It

Talk to a Tutor

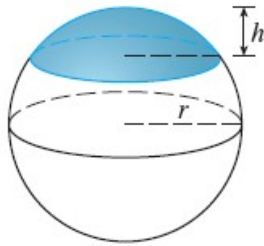
---

10. -/1.81 pointsSCalcET8 6.2.049.

Find the volume  $V$  of the described solid  $S$ .

A cap of a sphere with radius  $r$  and height  $h$

$V =$



Need Help?

[Read It](#)[Watch It](#)[Talk to a Tutor](#)

---

11. -/1.9 pointsSCalcET8 6.2.055.

Find the volume  $V$  of the described solid  $S$ .

The base of  $S$  is an elliptical region with boundary curve  $49x^2 + 4y^2 = 196$ . Cross-sections perpendicular to the  $x$ -axis are isosceles right triangles with hypotenuse in the base.

$V =$

Need Help?

[Read It](#)[Watch It](#)[Talk to a Tutor](#)