

[← MA2009, section GRUPO4, Fall 2019](#)

## Curvas y Superficies de Nivel (Homework)

 **INSTRUCTOR**
**Luz Maria Gonzalez**  
 Tecnológico de Monterrey, Mexico

### Current Score

**Due Date** Past Due

QUESTION	1	2	3	4	5	6	7	8	9	10	11
POINTS	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	1/1 ✓	2/2 ✓

**TOTAL**

12/12

100.0%

**SEP. 7 11:59 P. M.**
 [Request Extension](#)

### Assignment Submission & Scoring

#### Assignment Submission

For this assignment, you submit answers by questions.

#### Assignment Scoring

Your best submission for each entire question is used for your score.

**The due date for this assignment has passed.**

Your work can be viewed below, but no changes can be made.

**Important!** Before you view the answer key, decide whether or not you plan to request an extension. Your Instructor may not grant you an extension if you have viewed the answer key. Automatic extensions are not granted if you have viewed the answer key.

 [Request Extension](#)
 [View Key](#)

1.

1/1 points Previous Answers

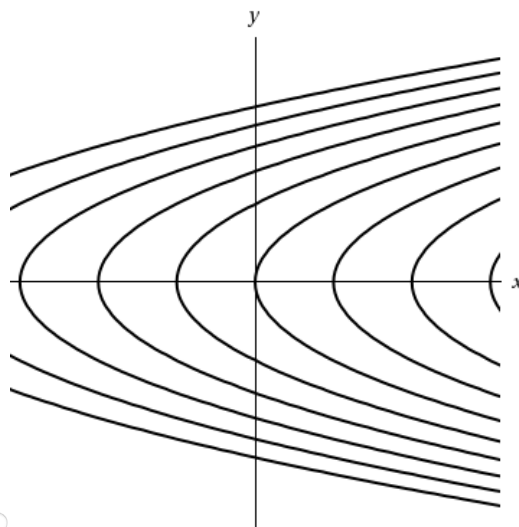
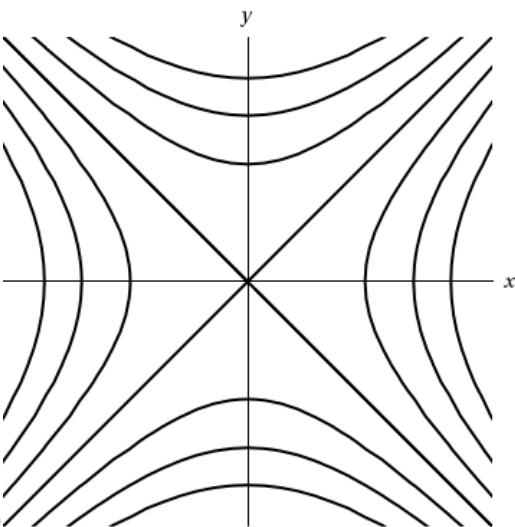
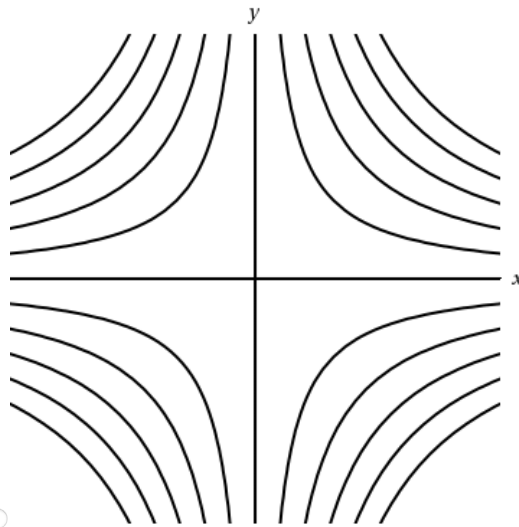
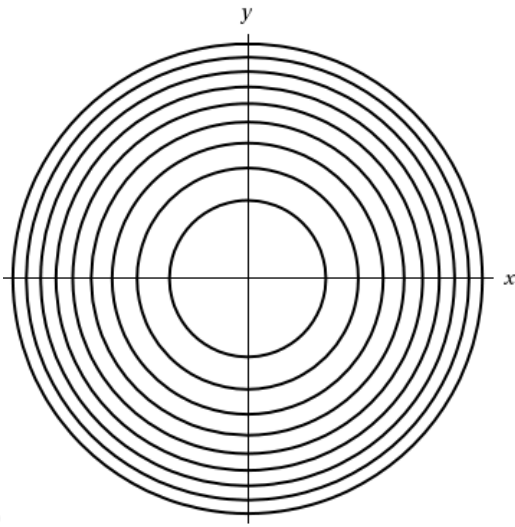
SCalcET8M 14.1.045. 1/5 Submissions Used

 My Notes

Ask Your Teacher

Draw a contour map of the function showing several level curves.

$$f(x, y) = x^2 - y^2$$

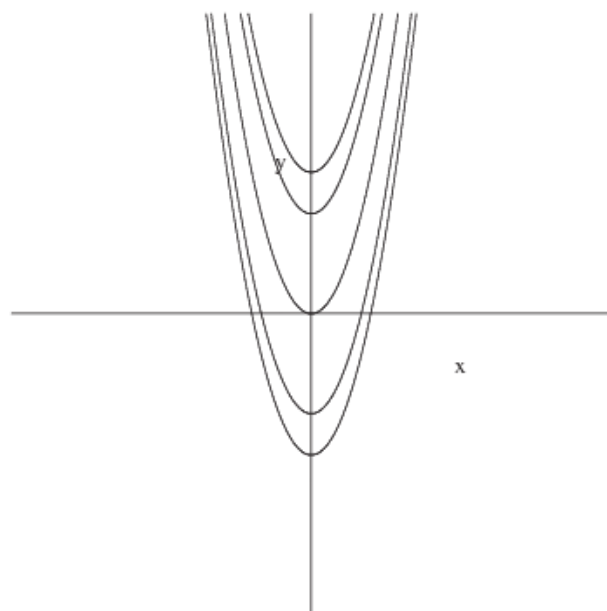
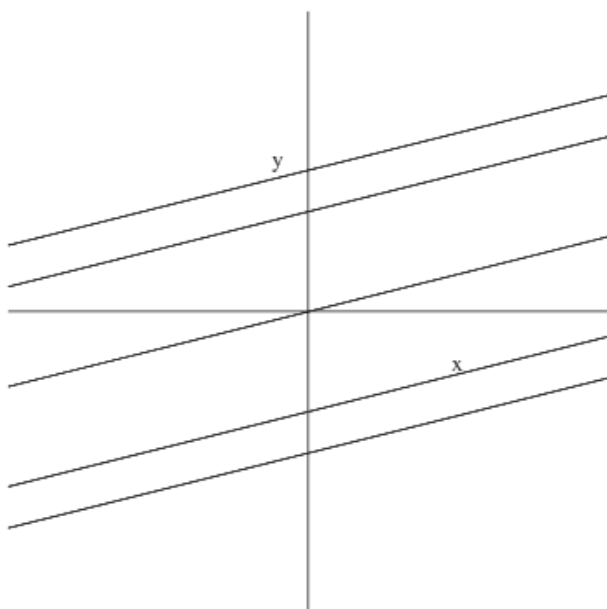
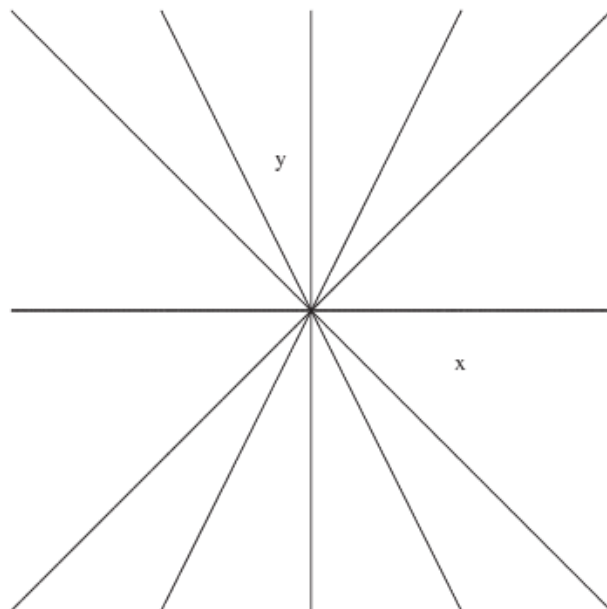
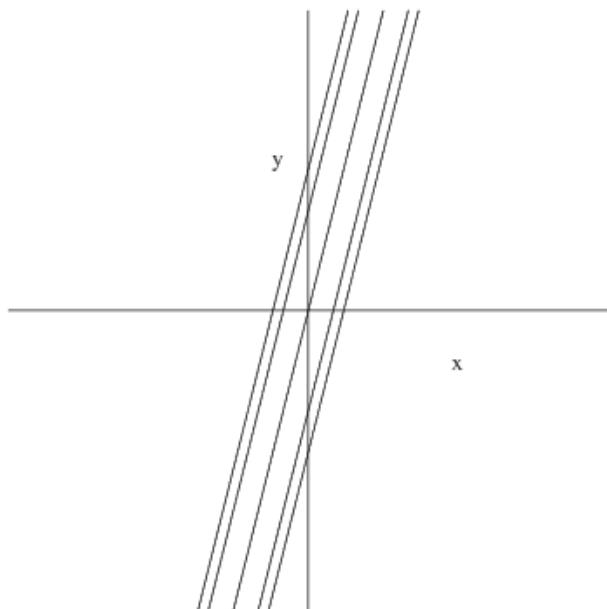


Need Help?

Read It

Draw a contour map of the function showing several level curves.

$$f(x, y) = (y - 4x)^2$$



Need Help?

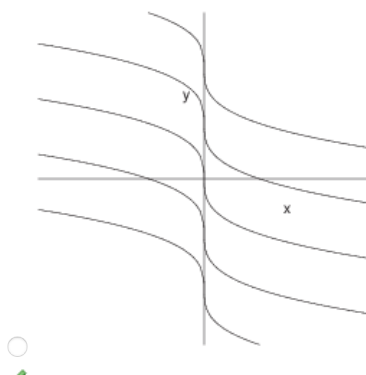
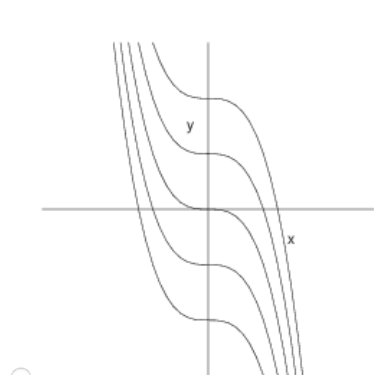
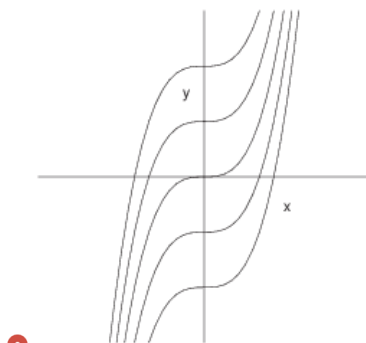
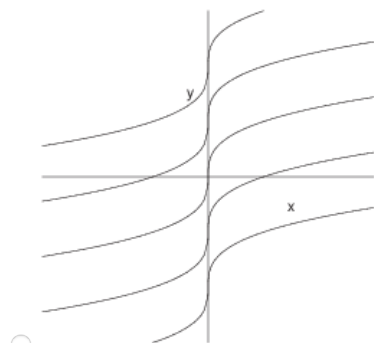
Read It

Watch It

Master It

Draw a contour map of the function showing several level curves.

$$f(x, y) = x^3 - 2y$$

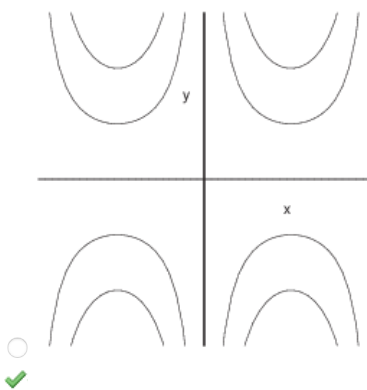
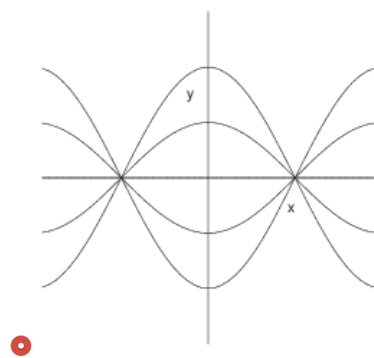
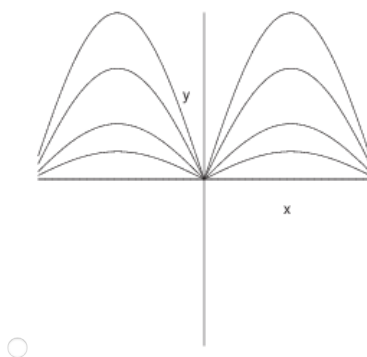
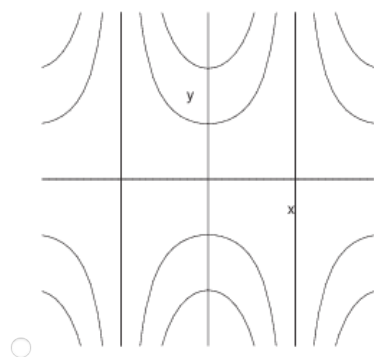


Need Help?

Read It

Draw a contour map of the function showing several level curves.

$$f(x, y) = y \sec(7x)$$

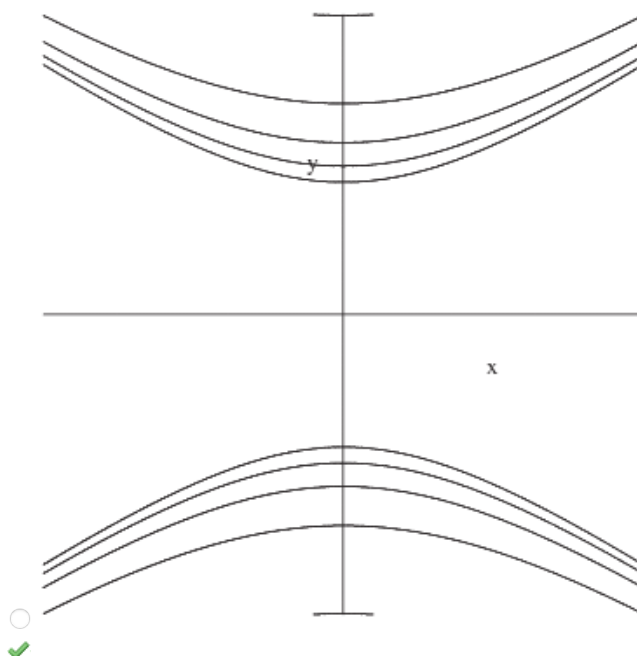
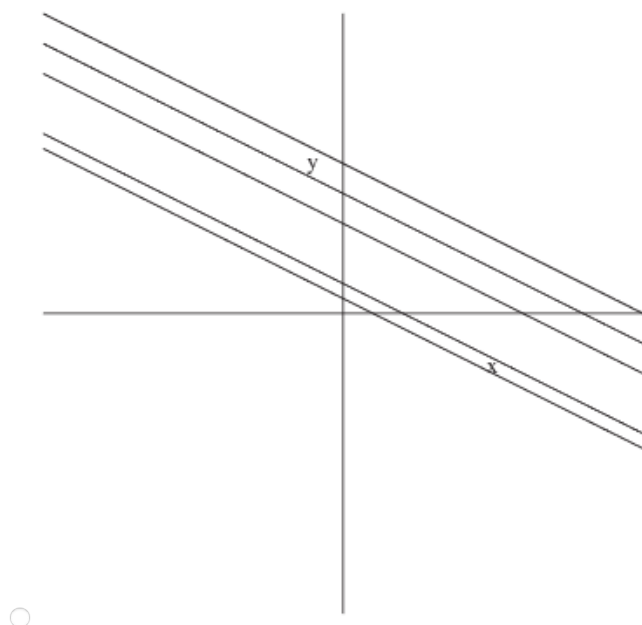
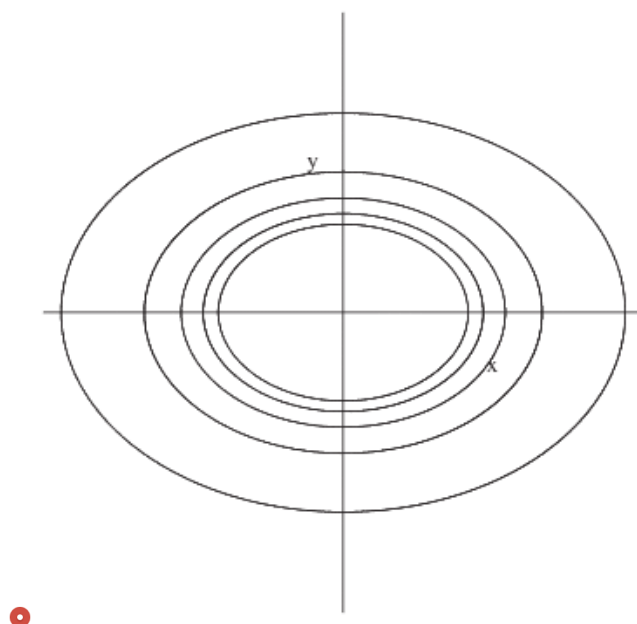
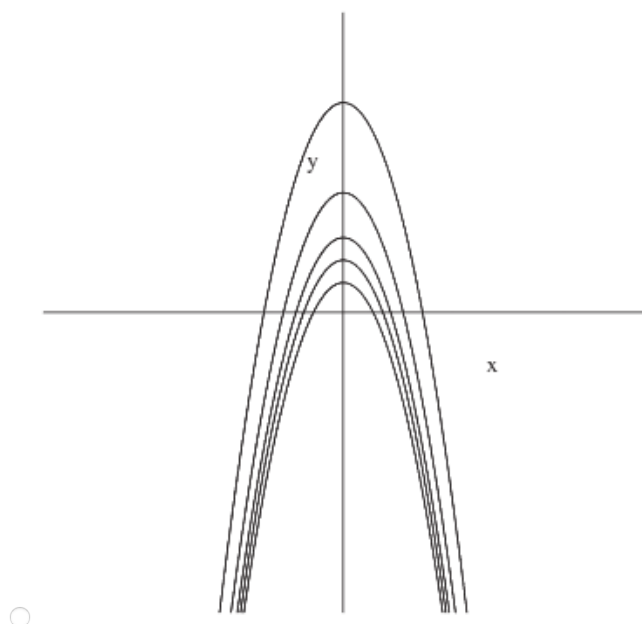


Need Help?

Read It

A thin metal plate, located in the  $xy$ -plane, has temperature  $T(x, y)$  at the point  $(x, y)$ . Sketch some level curves (isothermals) if the temperature function is given by

$$T(x, y) = \frac{200}{1 + x^2 + 2y^2}.$$



Need Help?

Read It

Watch It

Master It

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Describe the level surfaces of the function.

$$f(x, y, z) = x^2 + 3y^2 + 2z^2$$

- ☐ The level surfaces are a family of parallel planes.
- ☒ The level surfaces are a family of ellipsoids.
- ☐ The level surfaces are a family of hyperboloids.
- ☐ The level surfaces are a family of hyperbolic cylinders.



Need Help?

Read It

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Describe the level surfaces of the function.

$$f(x, y, z) = x^2 - y^2 - z^2$$

- ☐ The level surfaces are a family of parallel planes.
- ☐ The level surfaces are a family of ellipsoids.
- ☐ The level surfaces are a family of hyperbolic cylinders.
- ☒ The level surfaces are a family of hyperboloids.



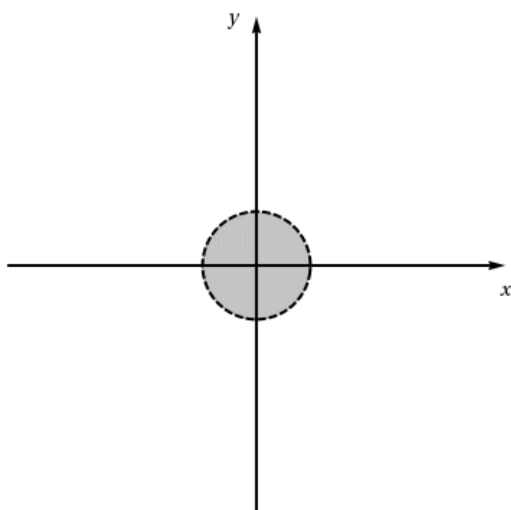
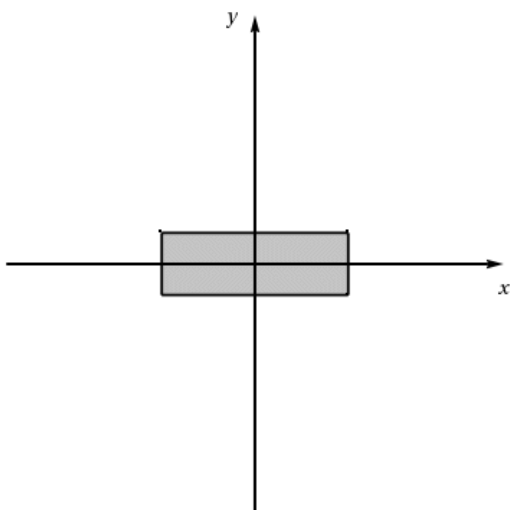
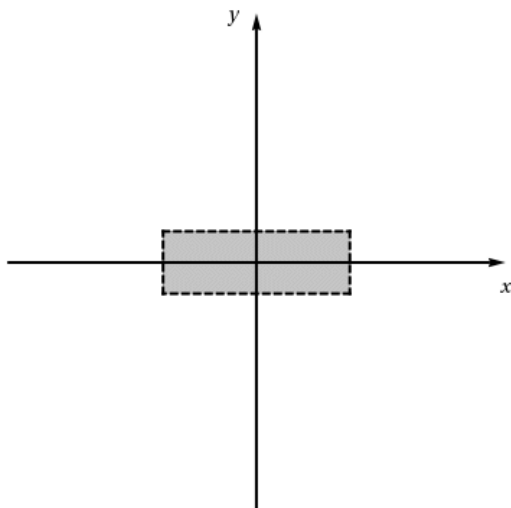
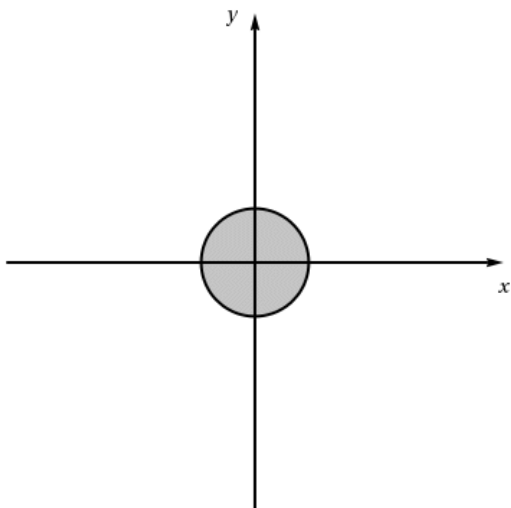
Need Help?

Read It

Watch It

Find and sketch the domain of the function.

$$f(x, y) = \sqrt{9 - x^2} - \sqrt{1 - y^2}$$



Need Help?

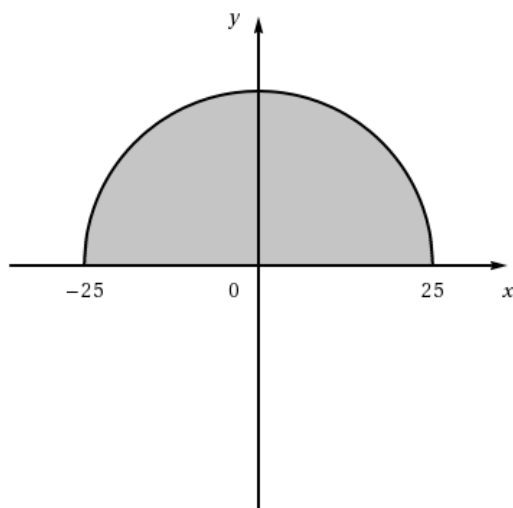
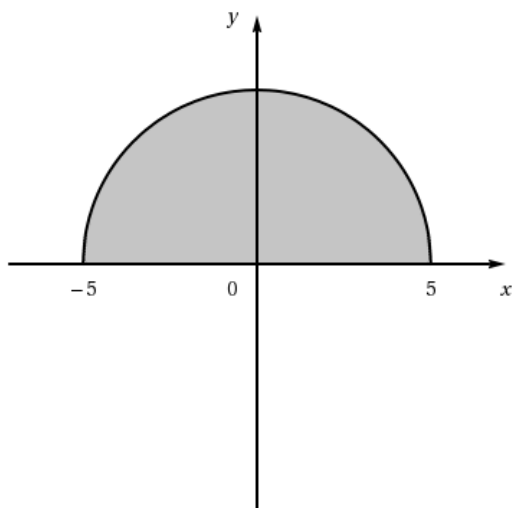
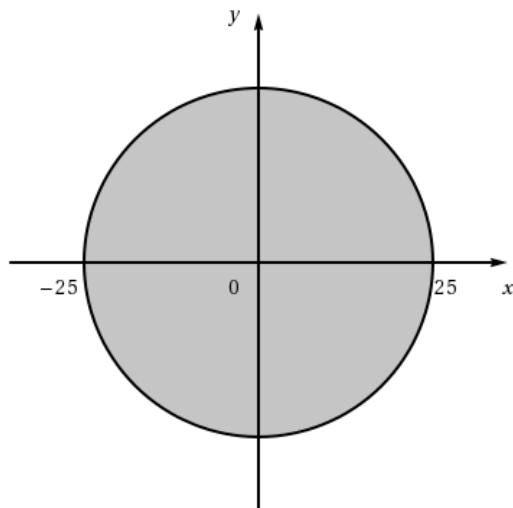
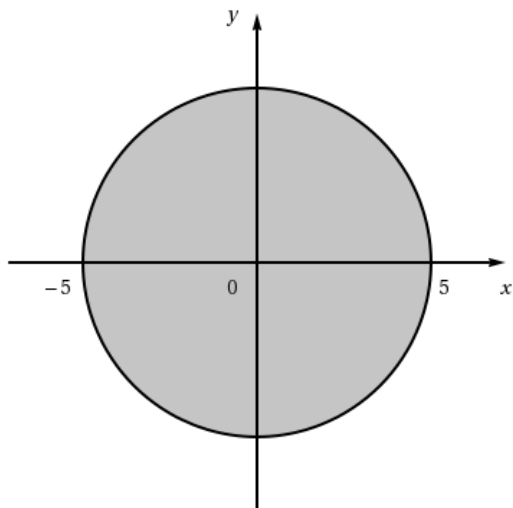
Read It

Watch It



Find and sketch the domain of the function.

$$f(x, y) = \sqrt{y} + \sqrt{25 - x^2 - y^2}$$

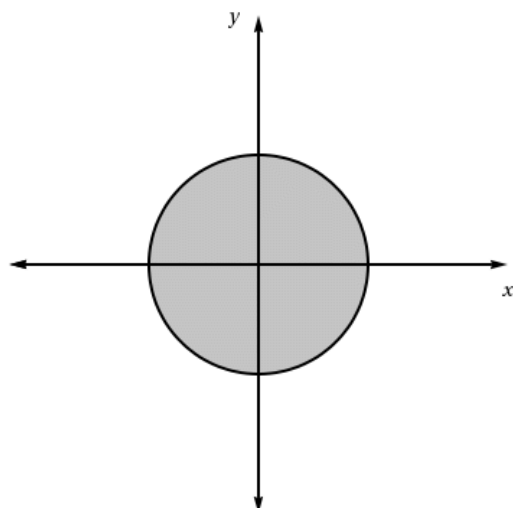
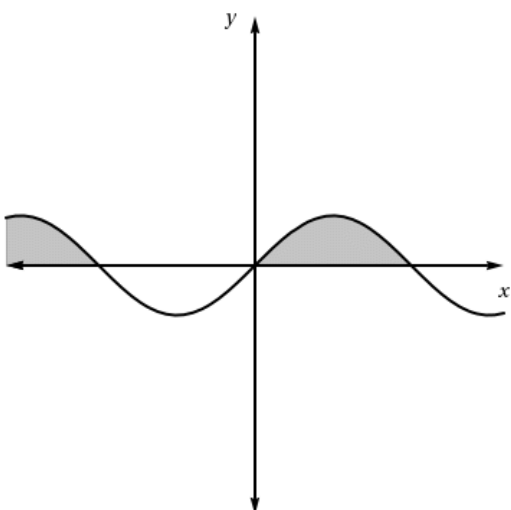
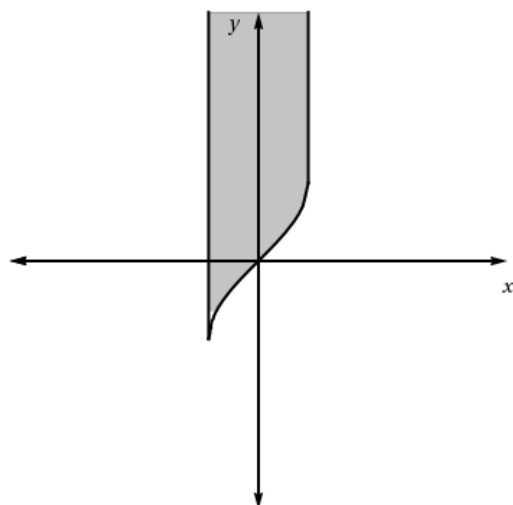
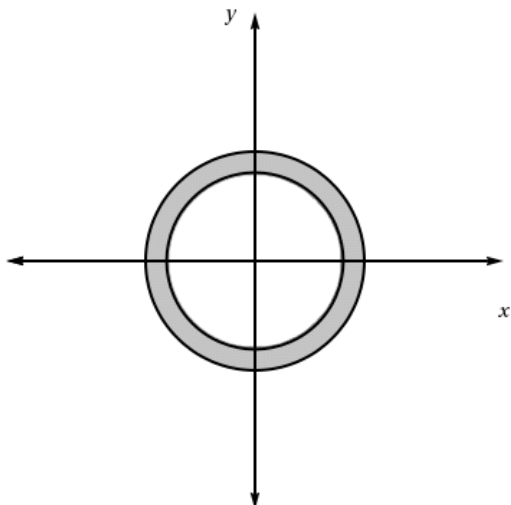


Need Help?

[Read It](#)

Find and sketch the domain of the function.

$$f(x, y) = \arcsin(x^2 + y^2 - 4)$$



Need Help?

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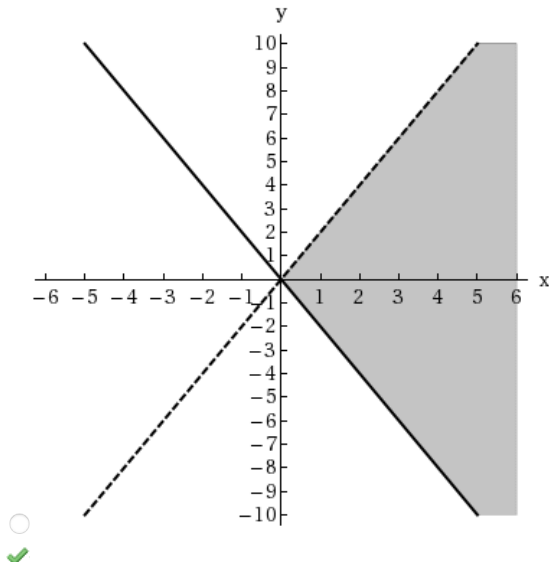
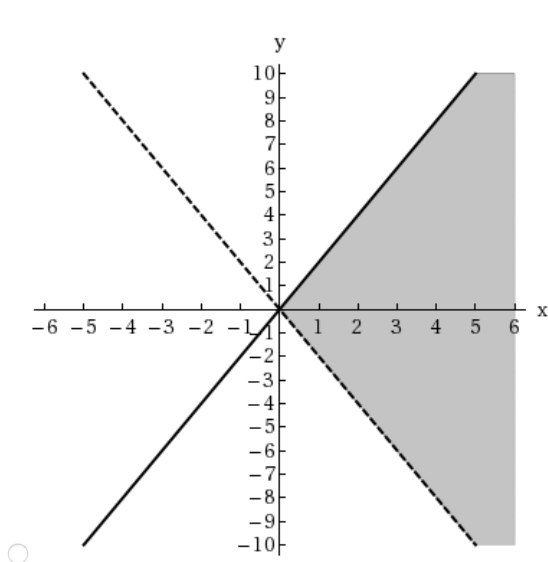
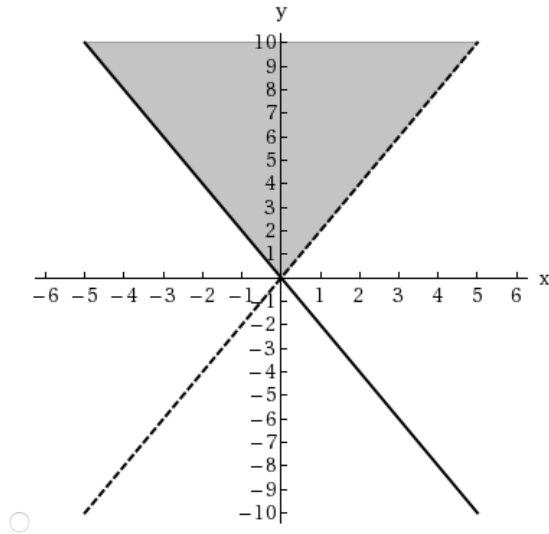
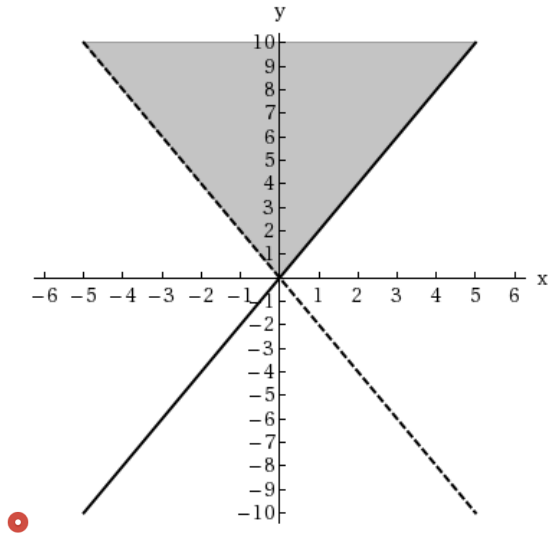
Find the domain of the function.

$$f(x, y) = \sqrt{y - 2x} \ln(y + 2x)$$

- ☐  $-y < 2x \leq y, x > 2x$
- ☐  $x > 0, y > 0$
- ☐  $x > 0, y > 2x$
- ☒  $-y < 2x \leq y, y > 0$
- ☐  $x < 0, y > 2$



Sketch the domain of the function.



Need Help?

Read It

